1 UNITED STATES DISTRICT COURT 2 FOR THE DISTRICT OF ARIZONA 3 4 In Re: Bard IVC Filters MD-15-02641-PHX-DGC Products Liability Litigation 5 Phoenix, Arizona May 16, 2018 6 Doris Jones, an individual, 7 Plaintiff, CV-16-00782-PHX-DGC 8 v. 9 C.R. Bard, Inc., a New Jersey corporation; and Bard Peripheral 10 Vascular, Inc., an Arizona corporation, 11 12 Defendants. 1.3 14 15 BEFORE: THE HONORABLE DAVID G. CAMPBELL, JUDGE 16 REPORTER'S TRANSCRIPT OF PROCEEDINGS 17 TRIAL DAY 2 - A.M. SESSION 18 (Pages 231 - 344)19 20 21 Official Court Reporter: Patricia Lyons, RMR, CRR 22 Sandra Day O'Connor U.S. Courthouse, Ste. 312 401 West Washington Street, SPC 41 23 Phoenix, Arizona 85003-2150 (602) 322-7257 24 Proceedings Reported by Stenographic Court Reporter 25 Transcript Prepared with Computer-Aided Transcription

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10:01:31 1 PROCEEDINGS 2 3 (Proceedings resumed in open court outside the presence of the jury.) 08:30:34 THE COURT: Please be seated. Morning, everybody. 6 7 EVERYBODY: Morning, Your Honor. 8 THE COURT: Counsel, do you have matters we need to 9 address this morning before we get started? 08:30:42 10 MR. O'CONNOR: Possibly with Dr. Asch. 11 MR. CLARK: I have a very short one, Your Honor. 12 We have a number of exhibits that we have, I think, 13 agreed can come into evidence and I would like to move those 14 into evidence now. 08:30:59 15 THE COURT: Let's do it in front of the jury. MR. CLARK: Is that better? 16 THE COURT: Well, they need to know they're in 17 evidence. 18 19 MR. CLARK: Fair enough. 08:31:05 20 THE COURT: If there are issues we need to discuss, I'm happy to do that, but I'd like you to move them into 21 2.2. evidence in front of the jury so they know they're in 23 evidence. 24 MR. CLARK: One other thing related to that. Since 08:31:15 25 most of these relate to deposition exhibits that are now trial 08:31:18 1 exhibits, would it be okay to prepare sort of a chart that we 2 can give to the jury, and perhaps the first time the Court can 3 instruct them for their convenience we've done the conversion from trial exhibit to deposition exhibit? I noticed they were 5 taking notes when we were talking about that yesterday, and it 08:31:31 seems that process is a little cumbersome, so I would like --6 7 THE COURT: So this would just list trial exhibit 8 numbers and the corresponding deposition exhibit numbers? 9 MR. CLARK: For each witness; correct. THE COURT: Any objection? 08:31:43 10 11 MR. NORTH: No objection, Your Honor. 12 THE COURT: Yeah, I actually think that would be 13 helpful because even I was having trouble keeping up with 14 which exhibits were which. MR. CLARK: That will make me not read as fast too. 08:31:52 15 Thank you. 16 17 THE COURT: Anything else we need to address? 18 MR. NORTH: Nothing for the defendants, Your Honor. Oh, I'm sorry, there is one document. 19 08:32:03 20 MR. O'CONNOR: Just the issue, Your Honor, Dr. Asch 21 is going to testify. There's an Exhibit 5247. We've got the 2.2. exhibits the defense intends to use with Dr. Asch. Setting 23 aside the hearsay nature, they have redacted, I think, in 24 accordance with your order, but the redactions, again, they 08:32:34 25 deal with presumably death, but I know we raised the issue

yesterday and I know that the issue is being taken under 08:32:39 1 2 advisement, but over -- for example, the statement in this 3 Dear Colleague letter says overall migration-related fatality 4 rate is below the reported 0.1 percent. They want to redact 08:33:01 5 "fatality." 6 Again, this is just the same problem with this order. 7 I don't think the jury's going to understand, if this document 8 even gets in, what rate they're talking about that is less 9 than 1 percent. 08:33:12 10 THE COURT: Is this a document that you understand 11 defendants are going to use in the examination of Dr. Asch? 12 MR. O'CONNOR: Yes. We had exchanged them last 13 They were kind enough to show me what they're going to 14 redact. I had told them back that I was going to raise this 08:33:26 15 issue with you in view of what we talked about yesterday and, 16 really, whether this document really completely falls within 17 your order. Admittedly, it does talk about migration-related fatalities, and it's a Dear Colleague letter. They want to 18 show it to Dr. Asch. 19 MS. HELM: Your Honor, I have a copy of the document, 08:33:46 20 21 if that would help you. 22 THE COURT: Yes, that would help. 23 MS. HELM: I'm happy to hand you a copy with proposed 24 redactions. That would probably be the most --08:34:04 25 THE COURT: Okay.

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         1
                        So is it the highlighted material you propose to
         2
               redact?
          3
                        MS. HELM: Yes, Your Honor. Only the first page.
          4
                        THE COURT: How are you going to use this document,
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              Ms. Helm?
08:34:17
         6
                        MS. HELM: Actually, Mr. North is not a hundred
         7
              percent sure he's going to use it, but it's a possibility
         8
              he'll use it with Dr. Asch on cross, and so we listed it on
               our exhibit list.
08:34:27 10
                        THE COURT: So at some point you'll move it into
        11
              evidence?
        12
                        MS. HELM: Possibly, yes.
        13
                        THE COURT: Okay. Let me just look at these
               redactions.
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                        Is this a letter sent to doctors?
                       MS. HELM: Yes, Your Honor. By Bard. Relating to
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        17
              the Recovery filter.
                        THE COURT: Help me understand, Ms. Helm, what it is
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              you believe the relevancy of this document to be. Or
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08:36:23 20
              Mr. North. That's fine.
                        MR. NORTH: Again, I'm not certain I will use that,
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        22
              but Dr. Asch in the past, who conducted the clinical study on
        23
              Recovery, has taken the position and testified repeatedly that
              Bard failed to warn him when adverse events were occurring in
        24
08:36:36 25
              the field. This was a Dear Doctor colleague letter that was
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08:36:40 1 sent out to doctors, and we have evidence that it was sent to 2 him. 3 If we decide to use it, it would be to rebut the --4 his contention that he was never notified and that somehow 08:36:51 Bard was hiding the occurrence of adverse events from him. 6 THE COURT: And the basis for the redactions is what? 7 MR. NORTH: The reference to migration-related 8 deaths. 9 THE COURT: And you understand these to be Recovery 08:37:09 10 filter cephalad migration deaths? 11 MR. NORTH: Yes. 12 THE COURT: Okay. 13 Mr. O'Connor? MR. O'CONNOR: I think the problem is broader than 14 08:37:18 15 that, Your Honor. And I'm just going by what happened here 16 last time in trial. 17 So Dr. Asch is going to testify that there was a cephalad migration in his study, and that it concerned him. 18 And it concerned him that it could be potentially fatal. I 19 08:37:31 20 think that is fair game under your order. 21 His testimony's going to be that he had been told by 2.2. Bard there was going to be a long-term study, that he had 23 advised Bard that they needed to look at these filters more in 24 view of the complications he saw. 08:37:49 25 The defense, on cross-examination, are going to ask

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him if he continued to use Recovery filters, and he's going to say yes, he did, and he's going to explain why.

But at some point he stopped. And he stopped because he learned on the streets, not from Bard, but because of the reports that were coming in about the complications, including the fatal complications.

So they're going to go into that, and they want to only tell half the story. And that's what's going to happen with a number of these doctors. And especially with Dr. Asch here.

A reason -- and it's necessary to put all of this testimony in context that he finally stopped using these filters is because he realized it was not a long-term study. And not only that, through sources other than Bard, he heard and found out what the medical community was finding out, that these things were killing people.

So at every corner, they can open the door to this.

THE COURT: Well, the argument -- I think the argument you just made, Mr. O'Connor, is a bit different from where we started, which is with this exhibit. You're now arguing, I think, that you should be able to elicit cephalad migration evidence as part of Dr. Asch's testimony regardless of whether this exhibit issues.

MR. O'CONNOR: I agree. I think they're somewhat interrelated because they want to use this to show Dr. Asch

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that there were warnings, that he felt he wasn't warned. Thi document was faxed to him. But along those lines, his testimony would be, and, yes, I stopped using filters not because of necessarily a warning you gave me, because I was finding out about deaths on my own.

So I think that these are interrelated. How they want to use them and the doors that are going to open, and the problem is this jury's never going to hear the complete sense of the complete picture of his testimony explaining why he did things.

THE COURT: Mr. North?

MR. NORTH: Your Honor, I would respectfully submit that this is somewhat of a hypothetical debate right now, because a lot will depend on what Dr. Asch says, what questions are asked him, both on direct and cross.

Again, I'm not even certain I'm going to use this document as an exhibit. If I did, I don't believe that I would need to publish it to the jury. We certainly can talk about redactions afterwards if we decide to use it.

The fact of the matter is, though, I believe they're trying to use Dr. Asch as a way to further seek reconsideration of the Court's order. Dr. Asch has previously testified that he was concerned about the Recovery filter and did not believe it was ready to go to market, based on his personal experience in his study, clinical study, where there

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was one asymptomatic migration and one asymptomatic fracture. And he said Bard had promised him they would do a European study before they put this thing on the market. Yet he continued to use the device in his practice.

That's why we're trying to get in the fact that he continued to use the Recovery filter, to refute his testimony and claim that we exploited and misused his clinical study to bring the device to market when it wasn't ready to do so.

entered last night. I'm continuing to be of the view that cephalad migration deaths from Recovery filters are inadmissible under Rule 403. I continue to think the relevancy to this Eclipse case is marginal enough that the danger of unfair prejudice outweighs that relevancy. I know the plaintiff disagrees with that. But that's my conclusion after looking at it four times now, I think, including last night again.

However, as you also saw in that order, I do think it's going to be fair, when we get to the point of the defendant presenting evidence about the number of deaths and statistics you can conclude from that, for the plaintiff to go into the true number of deaths, and we'll decide the scope of it then.

I think I'm going to have to do the same thing at other points in the trial. If I conclude during the testimony

08:43:33 25

of Dr. Asch that there is some fairness point that needs to be addressed for his testimony to be accurate, I'll be happy to consider it at that point. But I'm not going to -- I can't conclude this morning that the door's been opened and we can go into cephalad migration deaths. I'm still of the view that's barred by Rule 403.

So I think what we ought to do is go forward with Mr. Asch -- Dr. Asch's testimony. At this point my ruling stands. So the cephalad migration references in this exhibit should be redacted. But if plaintiff's counsel thinks, during his testimony or afterward, that a door has been opened that in fairness ought to allow you to do something, I'd be happy to hear it at that point, because I want to make sure you don't have an unfair case to present. But I'm still convinced that that's a Rule 403 ruling that's correct.

So what I'm saying is I'm not going to rule in your favor now, Mr. O'Connor. If you want to raise the issue at sidebar before redirect after Bard has cross-examined, I'll be happy to consider what you have to say at that point.

MR. O'CONNOR: All right. Well, just so we're all — and I know your order, Your Honor, and you had told us that nothing precludes us to talk about the risks of death, and he is going to talk about that. That was his concern.

My problem now is how do I present him? Because putting this witness on, do I want to have him explain up

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front, when I know what the cross-examination's going to be, or do I approach the bench with you, because the problem's going to be that only part of the story's going to be told, that he continued to use the Recovery. And he will say he stopped. But this jury's never going to understand why he stopped. And he stopped because --

THE COURT: Well, here's my problem with that argument, Mr. O'Connor, so you understand my thinking. Your primary point through Dr. Asch is going to be that on the basis of his studies, he had serious concerns about the Recovery filter and he expressed them to Bard, and Bard told him there would be a larger study, and the larger study never happened. That, to me, is the main point you want to get across.

Now, Bard is going to impeach him in part by saying, well, with all these concerns, Doctor, you kept using the filter. And that is to undercut his credibility he thought there was a serious problem.

It seems to me your rebuttal to that is he stopped doing that. He stopped doing it because he became concerned about the -- more concerned about the safety of the Recovery, and so he stopped.

That responds to their rebuttal.

Now, the reason he stopped, whether it's he had continuing concerns or specifically he heard about cephalad

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migration deaths, again, to me, isn't as important as the point that he stopped because he had continuing concerns, which responds to their point.

So I'm not seeing your unfair advantage at this point. But if you believe, after you've done your direct and they've crossed on this issue, that the only fair way to respond fully to their attempted impeachment is to bring out the evidence of the deaths, I'll be happy to hear you at that point. But right now I can't conclude that that's going to be a necessary fairness point.

MR. O'CONNOR: If I can just make one point just so my record's clear. I understand what you're saying and I understand your reasoning, Your Honor. But their argument, every minute they get, is all filters fail and that the Recovery was failing, Dr. Asch knew it, and he continued to use it. He stopped.

The jury's going to wonder, well, that's kind of self-serving for him to put his testimony -- I just want this to be clear on the record -- why he stopped. It's because he learned about something much more serious than Bard was leading people to believe. Much more serious than what's happening in this trial. And that's what caused him and many doctors to stop.

So I just want the record to be clear that's why I think it's important, so the jury can hear this witness and

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evaluate his credibility completely, not with half-truths and
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         2
              not with half stories.
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                        THE COURT: I understand your point.
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                        MR. O'CONNOR: Thank you.
08:46:20
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                        THE COURT: All right. Any other matters we need to
               raise?
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                        MS. HELM: No, Your Honor.
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                        May I get that exhibit back so we can redact it.
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                        THE COURT: Yes.
                       Mr. Combs.
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                        MR. COMBS: Your Honor, just a preview. We filed a
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              bench brief last night, somewhat of a response to Bard's bench
        13
              brief a night or two before. Unless you're keeping the same
              hours that we are, I doubt you read it, but I think it's
         14
08:46:44 15
               something we need to raise tomorrow morning before --
         16
                        THE COURT: This is on the Childs issue?
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                        MR. COMBS: Yes. But when Mr. Modra testifies, we
               want to have that clarified.
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                        THE COURT: I haven't read your brief. We've
         19
               reviewed the government's brief. We're looking at the cases
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              you cite that you think counteract the effect of the Childs
        22
               case. I'll look at what you have filed.
         23
                        So when do you think this is coming up?
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                        MR. COMBS: I think it's coming up just tomorrow
08:47:12 25
              morning, before we call Mr. Modra.
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                        THE COURT: You're calling Modra tomorrow?
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                       MR. COMBS: I think that's correct, yes.
          3
                        THE COURT: So you're hoping to get in those reports,
          4
              the MDR, is that what they're called, reports?
08:47:24
         5
                        MR. COMBS: Monthly management reports. And then
              also a 1006 summary of all of the complaints historically.
         6
         7
                        THE COURT: Okay.
         8
                        All right. We will -- I will look at your brief,
         9
              we'll continue looking at the cases that have been cited.
08:47:40 10
                        MR. COMBS: Thank you, Your Honor.
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                       MS. REED ZAIC: Housekeeping note, Your Honor. You
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               said you reviewed the government's brief. It's actually
              Bard's brief. I'm not trying to call it a misspeak. I just
        13
              wanted to make a record that the government hasn't entered a
        14
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              brief.
                        THE COURT: Thanks.
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        17
                        All right. We'll bring the jury in at 9:00.
                        MR. COMBS: I think we all understand we're used to
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               the government siting over there.
                        THE COURT: Actually, they actually sit there.
08:48:03 20
        21
               Thanks for trying to help me out.
        22
                        MR. COMBS: That's right.
        23
                        THE COURT: The burden of proof.
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                       MR. COMBS: That's right.
08:48:14 25
                       MR. O'CONNOR: Your Honor, mind if I step out?
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08:48:16 1 THE COURT: Yeah. 2 (Recess was taken from 8:48 to 9:00. Proceedings resumed in open court with the jury present.) 3 4 THE COURT: Thank you. Please be seated. 09:01:48 5 Good morning, ladies and gentlemen. Thanks for being 6 with us this morning. 7 Counsel, I wanted to mention something. Juror 6 mentioned to Traci that he has a bit of color-blindness and 8 has difficulty distinguishing red. 9 09:02:04 10 Is that right? 11 JUROR: Yes. Red text versus black. 12 THE COURT: Red text versus black. 13 So in illustrations or charts or things like that, if 14 you want to emphasize something, don't do it in red because 09:02:18 15 Juror 6 won't see the emphasis. 16 We will continue the testimony this morning with the 17 deposition testimony we left off yesterday. (Video testimony of Gin Schulz played.) 18 MR. O'CONNOR: Your Honor, I think that concludes the 19 09:24:20 20 video. 21 At this time we call Dr. Murray Asch. 2.2. THE COURT: All right. 23 THE COURTROOM DEPUTY: Dr. Asch, if you'll please 24 come forward. You can stand right here and raise your right 09:24:56 25 hand, sir.

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

09:25:03	1	DR. MURRAY ASCH,
	2	called as a witness herein, after having been first duly sworn
	3	or affirmed, was examined and testified as follows:
	4	MR. O'CONNOR: May I proceed?
09:25:03	5	THE COURT: Yes.
	6	DIRECT EXAMINATION
	7	BY MR. O'CONNOR:
	8	Q Good morning. Would you tell the members of the jury your
	9	name, please.
09:25:37	10	A My name is Murray Asch.
	11	Q You're a medical doctor?
	12	A Yes, I am.
	13	Q Dr. Asch, where are you from?
	14	A I'm from Oshawa, Ontario, Canada.
09:25:49	15	Q And what do you do in Canada? What type of medicine do
	16	you practice?
	17	A I'm an interventional radiologist.
	18	Q Would you explain to the members of the jury what an
	19	interventional radiologist is.
09:26:00	20	A Well, it should be fairly simple. I'm sure all of you
	21	have heard the recent discussion about Mrs. Trump and the
	22	procedure she underwent, an embolization of a kidney. So
	23	that's a procedure performed by interventional radiologists.
	24	We do procedures using ultrasound and CT and X-ray, and using
09:26:21	25	tools like needles and tubes and specialized devices, we do

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

biopsies, we drain organs, we block blood vessels, and 09:26:27 1 2 replace IVC filters and remove IVC filters. 3 Is an interventional radiologist different than a 4 radiologist who, say, reads radiographic studies, a clinical 09:26:47 5 or diagnostic radiologist? 6 Yes. So interventional radiologists have specialized and 7 additional training where we spend time working surgical-like 8 suites where we do these kind of procedures. General 9 radiologists read CATs and have specialized training as well. 09:27:01 10 They read CAT scans, do ultrasounds, and read MRIs, but they 11 don't typically do procedures. 12 Now, you have -- have you set forth your education and 13 professional credentials in what is known as a curriculum 14 vitae? 09:27:18 15 Α Yes. 16 MR. O'CONNOR: May I display Exhibit 4555.001? 17 THE COURT: To the witness? 18 MR. O'CONNOR: To the witness, yes. BY MR. O'CONNOR: 19 09:27:35 20 Would you describe what you are looking at, Dr. Asch? So that is my curriculum vitae, my resume. Summary of 21 Α 22 all my education and experience. 23 Dr. Asch, would you tell us your education, what training 24 you received to become a interventional radiologist?

I'll start with medical school instead of going back

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

- further than that.
- Q Thank you.

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- A So I went to medical school, four years of medical school. I then did two years of additional generalized internal medicine training. Following that I did four years of a diagnostic radiology residency training program. And following that I did one year of specialized subspecialty fellowship in interventional radiology.
- Q And where -- what institutions did you receive that training at?
- A I went to medical school in London Ontario, University of Western Ontario. I did my internship in Hamilton, Ontario.

 And all of my radiology residency and fellowship was done at University of Toronto in Toronto.
- Q And when you talk about residency and fellowship, can you explain what that means and where that places you as a medical doctor?
- A So residency is the basic training that people will get residencies in different specialties to be a radiologist, to become a surgeon, to become an internist, to become a dermatologist. So that is a generalized training that is the minimum requirement to go out and practice. Many people, myself included, would want additional training, subspecialty training, in order to become a super specialist, if you will. So that additional year of subspecialty training was called a

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

fellowship. So that's the year where, after becoming a 09:29:26 1 2 diagnostic radiologist, I spent an entire year essentially 3 doing interventional radiology procedures under the guidance 4 of a variety of trained experts. In the time period of 1999, 2000, where were you working 09:29:39 6 at that time? 7 I worked in Toronto at what was then called Mount Sinai 8 Hospital. 9 Were you involved in academics at all? 09:29:55 10 Yes. Mount Sinai is one of the University of Toronto academic teaching hospitals, so I had a variety of roles in 11 addition to clinical work, doing treating patients, helping 12 13 patients. I taught medical students, and I did a variety of 14 forms of research. 09:30:12 15 In your practice, have you been published? 16 Yes, I have. Many publications. 17 Have you been published in anything that has to deal with IVC, inferior vena cava filters? 18 Yes. There are a number of publications I have with 19 09:30:30 20 respect to a variety of types of permanent and temporary IVC 21 filters. 22 And can you just explain for us what it means when a doctor publishes an article? Why would a doctor undertake 23 24 that and how is that literature generally used in the medical 09:30:50 25 community?

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

We do research to try to promote and progress and enhance the knowledge throughout the medical community, to share our experience in a scientific way in order to guide other physicians to change their practice. Things in -- in particular, interventional radiology really are constantly evolving, and the majority of procedures I do now weren't invented, if you will, when I trained. So we learn procedures based on reading articles, based on sharing information through societies and at meetings with other physicians. So I, like others, have chosen to write scientific published manuscript papers in order to share my experience, in order to improve patient care throughout the world. Thank you. Do you consult -- you treat patients as a medical doctor? Α Yes, I do. Do you consult with medical device companies? Yes. I'm a consultant -- I have done and I continue to Α be a consultant for a variety of medical device companies. And do you -- when you do medical consulting, do you charge for your time? Α Yes, I do.

Currently, where do you practice?

Currently, I practice at a large community academics

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

center in Oshawa, Ontario.

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- Q And would you just tell us, are you with a group of interventional radiologists? Or give us an idea of the people you work with.
- A So we have a group currently of approximately 13 radiologists, interventional radiologists and general radiologists, and we all pool our work and pool our resources and pool our income, so we all work together and share patients and share the workload.
- Q Why are you here today? Do you understand?
- A I'm here today because I feel responsible for the widespread use of what was initially called the Recovery filter, and I'm concerned about it and concerned about the damage it's caused some patients. And I'm here to ensure that I can do everything I can to try and make that better.
- Q Now, you, back in the 1999, 2000 time period -- first of all, you are involved in professional societies and associations; correct?
- A Yes, I am.
- Q And what is SIR?
- A SIR is the largest interventional society in the world. It stands for Society of Interventional Radiology. The head office is in the States. And I am a fellow and used to be on the board of -- and continue to be a member/fellow of the SIR.

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

09:33:50 1 Q Now, Dr. Asch, were you involved in a pilot study for 2 Bard? 3 Yes, I was. Α And when was that? 09:33:57 The initial discussions began in 1999. 6 And tell us a brief overview of what the intent behind 7 that pilot study was. 8 Well, pilot study is a great word. And the initial 9 intent was to try and assess a brand-new never been used 09:34:15 10 filter in a human to see if it could be safely retrieved. 11 Were you retained at that time as a consultant? Q 12 Α Yes, I was. 13 And were you paid? Q 14 Yes, I was. Α 09:34:26 15 By Bard? 0 16 Α Yes. 17 Now, you've come down here all the way from Canada. you been compensated for your time? 18 Yes, I have. 19 Α 09:34:39 20 Can you explain to the jury how your compensation was paid 21 to you by this side, the plaintiff's side, to get you here. 22 Well, the compensation for being here today is identical 23 to the compensation I receive for any other medicolegal work 24 I do and all of the other work I did for Bard and for all 09:34:57 25 other medical device companies that I currently work with,

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

and that's essentially to replace the income that I am 09:35:00 1 2 missing because I'm here. Because I work in a group 3 practice, I can't just cancel my patients and not show up to 4 work. I'm losing income and at the same time I need to make 09:35:14 5 someone available to do the work that I am not doing. So I'm 6 being compensated for that. 7 And so for consulting medicolegal, what are you charging? 8 Depending how many hours it involves or if it's during 9 work or after work, it's either an hourly rate or a daily 09:35:33 10 rate. Typically it is around \$700 per hour. 11 And then if you're going to be gone for -- how many 12 days -- to get here, how many days did this take you away from 13 your practice? Four days. 14 Α 09:35:46 15 And how do you obtain compensation for that? 16 So the -- I earn approximately -- I earn a good living. 17 I earn approximately \$5,000 a day, so I've been paid to 18 replace my income. Dr. Asch, were your travel expenses paid for? 19 09:36:05 20 Α Yes, they were. Now, Dr. Asch, let's go back to 1999 or that period, and 21 22 if you can explain to the jury the circumstances, how you were 23 approached that got you the start of your involvement in the 24 Bard pilot study. 09:36:26 25 Α This all started at one of the SIR annual meetings.

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

was attending a meeting, and a group of individuals from Bard and, at that time, NMT approached me and said, we've got a novel idea for a new, never been used filter, and we would like you to be involved in the first human use pilot project to assess the retrievability of this. And that was the initial hallway discussion.

Following that, we sat down and met. And then I was flown to Boston where, at that time, NMT head office was, and I met with a group of individuals from Bard and NMT, and they gave me background information about the device and the planned project so that we could work together and move forward as a team.

Q Was there a presentation made to you?

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A Yes. So they gave me a presentation to give me a background on how the filter was designed. I hadn't been involved in filter design. They came to me with a filter that was designed and had been in preclinical testing, bench top testing, and animal testing, so they showed me all of the data that they had to satisfy my concerns about being the first person to place a device in a human. Obviously, that's a scary thing. I feel responsible for that.

And after answering all those questions, we then moved forward with a proposal I could bring to my hospital, my ethics board, my government in order to obtain permission to use the device.

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Now, when you say your government, that's in Canada? 09:38:02 1 Q 2 Yeah. In Canada, we have something called the Health 3 Protection Branch, which oversees use of medications and 4 medical devices. 09:38:13 Did people from Bard explain to you why they wanted to do 6 this pilot study in Canada? 7 Yes. The feeling I had from them was that because of 8 political differences in the different countries, it would be 9 easier to do a study like this in Canada than it would in the 09:38:29 10 United States. 11 Different regulatory pathway in Canada? 12 Yeah. So the Canadian government is felt at times to be 13 more lenient. Again, coming with a brand-new filter never 14 been used in a human before, there's lots of potential 09:38:44 15 concern about this, and it was felt that the Canadian 16 government would be more open and welcome to that. 17 So the purpose of the study, as you understood it, was to look at the retrievability of a Bard filter? 18 Yes. That was the single task that I was given, pilot 19 09:39:02 20 project, assess safety of removal of the device. Was your study to be used at all for any type of long-term 21 clinical study for safety or efficacy? 22 23 The understanding that I had was this was a -- pilot 24 study is a great word. A pilot study to obtain initial human

safety information, and then that information will be taken

09:39:21 25

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9:39:24 1	back to the United States in order to pave the way for
2	performing a long-term multicenter larger study to assess
3	other aspects of the filter, including long-term safety.
4	Q Was it your understanding that Bard did Bard indicate
9:39:42 5	to you that the company intended to a long-term safety study
6	after your study?
7	A Yes. In all of our discussions, that was a repeated
8	theme, long-term safety study after my pilot study.
9	Q So to do this study, how did your what was your
9:39:58 10	involvement in the beginning? Did you design the study? Were
11	you involved in that?
12	A I did not design the study or the filter, no. So Bard
13	and NMT worked together and provided me with all of the
14	documentation that I needed to supply to my ethics department
9:40:15 15	and to the government. So they gave me the introductory
16	package that I had already been shown at NMT, they gave me a
17	consent form, and they gave me a study protocol, all of which
18	I then submitted to the regulatory bodies.
19	MR. O'CONNOR: Gay, can you put up and display to the
9:40:45 20	witness Exhibit 556.
21	And can you scroll through each page.
22	BY MR. O'CONNOR:
23	Q And, Dr. Asch, if you could review it and tell us if you
24	recognize these documents.

A Yes. This is the package I just described. So that's

09:41:06 25

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

what -- you can't see it. What is up there right now is the 09:41:22 1 2 study design and the letter, copies of letters that I had 3 written to the ethics department and Health Canada asking for permission to use the device for this pilot study. 09:41:38 Are these documents that you received from Bard and related entities to initiate your study? 6 7 Α Yes. 8 MR. O'CONNOR: Move for admission of Exhibit 556. 9 MR. NORTH: No objection, Your Honor. THE COURT: 556 is admitted. 09:41:53 10 11 (Exhibit 556 admitted.) 12 MR. O'CONNOR: Thank you. 13 Let's go to --Oh. May we publish to the jury, Your Honor? 14 09:42:08 15 THE COURT: You may. 16 MR. O'CONNOR: Thank you. 17 Gay, let's go to the third page, please. BY MR. O'CONNOR: 18 Dr. Asch, can you explain to us what we're looking at 19 09:42:26 20 here? So this is a letter of approval from the chair of the 21 22 Mount Sinai Hospital research ethics board indicating 23 approval, indicating permission for me to use the device. 24 The typical permission, as indicated here, allows for 12 09:42:49 25 months and a limited number of devices, in this case 20, at

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

- which time I need to reapply for permission.
- Q And did that eventually happen?
- A Yes.

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- 4 MR. O'CONNOR: Go to the next page, Gay.
 - BY MR. O'CONNOR:
- Q We're looking at another letter dated November 8, 2001.
- 7 Could you tell us what this letter is, please.
 - A That is a letter from the chair of the research ethics board of the hospital allowing me to proceed with the study as requested.
- MR. O'CONNOR: And then the next page, Gay.
- 12 THE WITNESS: So that is page 1 of the study
- 13 proposal.
- 14 BY MR. O'CONNOR:
- 09:43:45 15 Q And is this what was an outline of how the study would 16 proceed?
 - 17 A Yes.

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- 18 Q And who provided this to you?
 - A That was provided to me by the team, referred to as the team, the team from NMT and Bard.
 - Q If you look down below, can you explain to the jury how the study was going to begin with patients and inserting filters in these patients.
 - A We were going to take patients that had the standard typical indications for IVC filters, and we would approach

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

them and inform them, informed consent, inform them that we 09:44:36 1 2 were doing this pilot study and they would be the first or 3 early patients, the first ones to receive this new unknown 4 filter. And we would discuss that with them, and then with 5 their permission, proceed to place the filter, and monitor 09:44:54 6 the patient, and then retrieve the filter. 7 Now, first of all, had you been using Bard filters before 8 this study? Prior to this study I had used the Bard permanent filter. Α 09:45:12 10 Which was the Simon Nitinol filter? 0 11 Α Yes. 12 And you understood that this was going to be a new device, this Recovery; is that correct? 13 14 Α Yes. 09:45:20 15 And what was it about the Recovery that was the proposal 16 that was new or different from the Simon Nitinol filter? 17 The filter had a number of modifications in order to facilitate having the filter removed. 18 Pardon me? 19 0 09:45:38 20 It had a number of modifications to allow the filter to 21 be removed. The other filters on the market, the so-called 22 standard permanent filters, are designed in a way that 23 they're meant to go into the body and stay in the body, and 24 there's not an easy way -- they're not designed to be 09:45:54 25 removed. Where this new filter has a hook on it to be

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removed, it's got deformable hooks to allow it to be removed 09:45:57 1 2 from the caval wall. 3 And how did you feel about that new filter? Well, the concept of a temporary retrievable IVC filter 5 has been discussed, had been discussed sometime prior to 09:46:14 6 this, and certainly of great interest to the medical 7 community. And we believe that, in concept, these filters 8 provide great benefit to patients because that way, instead 9 of having a filter in -- stay in the body for ten, 20 years, 09:46:34 10 the filter can be removed. 11 And when approximately did the study start, begin? Q 12 Α I'm sorry, can you repeat that. 13 When did the study start? Q I believe it was approximately 2000. 14 Α And where was the study conducted? 09:46:51 15 0 16 It was conducted at my hospital, Mount Sinai Hospital. As time went on, there were some mergers between the downtown 17 Toronto hospitals, and so it was conducted as well at Toronto 18 General Hospital and Toronto Western hospitals, which were 19 09:47:09 20 other hospitals that I worked at. Now, you said that you had met with people from Bard and 21 22 NMT and you underwent a -- you participated in a presentation; 23 is that correct? 24 Α That's correct.

09:47:28 25

MR. O'CONNOR: Gay, could you put up Exhibit 2090,

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

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09:47:31
         1
              please.
          2
               BY MR. O'CONNOR:
          3
                  Dr. Asch, do you recognize Exhibit 2090?
                   Yes. This is a copy of the PowerPoint presentation that
09:48:11
               was shown to me at the initial meeting that I attended in
          6
               Boston.
          7
                        MR. O'CONNOR: Move to admit Exhibit 2090.
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                        MR. NORTH: No objection, Your Honor.
          9
                        THE COURT: Admitted.
09:48:23 10
                    (Exhibit 2090 admitted.)
              BY MR. O'CONNOR:
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                   Now, who was present at the meeting in Boston, do you
        13
               recall?
                   I'm not sure I can recall all their names now. It was
         14
09:48:35 15
               essentially a combination of people from Bard Canada and Bard
               USA and NMT. I can name a number of names, if you'd like.
         16
                        MR. O'CONNOR: First of all, may I publish
         17
              Exhibit 2090 to the jury, Your Honor?
         18
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                        THE COURT: Yes.
               BY MR. O'CONNOR:
09:48:49 20
                   And, again, Dr. Asch, this is the first page. We will go
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        22
              through this.
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                        Was a Robert Carr present?
         24
              A Robert Carr was present, yes.
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               Q
                  Did you know a Dr. John Kaufman?
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09:49:02 1 Α Yes, I knew of John's reputation, and he was there as 2 well. 3 What about Dr. -- was it Morris Simon? Morris Simon was there as well. 09:49:15 Who is Dr. Simon? 6 Dr. Simon was, I believe, the founder of Nitinol Medical 7 Technologies, and his name, the Simon Nitinol filter, his 8 name is on the Simon Nitinol filter, which is distributed and 9 sold by Bard. 09:49:33 10 MR. O'CONNOR: Let's go to page 7 of the exhibit, 11 Gay. 12 And, if you could, highlight the -- in that box 13 Recovery filters that deal with vena cava filter, please. 14 BY MR. O'CONNOR: 09:50:01 15 So is this information that was provided to you, Dr. Asch, 16 to introduce to you this new concept of a retrievable filter? 17 Α Yes. And it says: Same strengths as a permanent filter. 18 Q How was that presented to you? 19 09:50:19 20 Α It was presented to me this filter was really a modification of a currently sold filter, the Simon Nitinol 21 22 filter, and so it could act, then, both as a permanent 23 filter, based on their presentation, as well as being 24 removable. So it had the option, in their view, that it

could be potentially a permanent filter and a removable

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filter.

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Q And did Bard indicate to you that there had been any testing conducted that established in their mind that the Recovery was the same as, for example, the Simon Nitinol filter?

A No. This was their hope and, again, I was led to believe that ultimately appropriate scientific testing would be done in terms of larger clinical studies to substantiate their claim, their hope, their ultimate aim.

Q If you look below it says: Accurate placement, enhanced centering, and a small sheath.

Do you see where I'm reading?

- A Yes, I do.
- Q What does accurate placement mean in the world of IVC filters to an interventional radiologist?

A Well, any medical device we place, it is important to have the device go where we want it to go. There have historically been some filters where, perhaps as you're deploying it, it may jump or move a little bit. And, actually, the Simon Nitinol filter, the permanent filter, did sometimes do that and it wouldn't always end up exactly where we wanted, which could have some negative effect in terms of its function and its complications. Whereas this different filter design was much more accurate in terms of its placement. And when you deployed it, it would go where you

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wanted it to go.

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- Q And enhanced centering, what does that mean? Could you put that in the context of filters?
- A So the IVC, we put these filters, these devices, into a tubular structure, and we want them to be centered. We want them to be aligned along the axis of the IVC in order to maximize function and reduce complication. And there's a lot of discussion in literature about filter tilts. And when a filter does tilt, there is more potential for a complication or filter failure. So enhanced centering, having the filter go where you want, centered along the axis, is important.
- Q And then: Removable at 12 weeks -- 12 weeks.

What was the significance to that statement in this presentation?

A The significance of that was there already was in Canada a device that had been released for sale by another manufacturer that could be retrieved, but the retrieval window for that was in the order of ten to 14 days. So the advantage of this newly designed filter was that a retrievability at 12 weeks gives much more option in terms of patient care.

MR. O'CONNOR: Gay, go to page 9.

BY MR. O'CONNOR:

Q Now, Dr. Asch, maybe just to put some context in what we're going to talk about, if you could just refresh all of us

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

- on just a little anatomy and just tell us about the IVC, the vena cava.
 - A So the inferior vena cava is essentially the largest vein in the body, which brings the blood from the legs, lower extremities, the pelvis, the abdomen, back to the heart. So it's kind of the opposite of the artery where blood flows down the artery and out into smaller arteries. The vein has multiple small veins from structures draining into it, which brings blood back to the heart.
 - Q And a filter, what is its intent?

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- A As the name suggests, the filter is meant to filter out blood clots, particles larger than red blood cells, and stop them from going to the lungs where, if a large clump, a large piece of blood clot goes to the lungs, it can cause serious injury, shortness of breath, pain, and death.
- Q Now, Bard, in its presentation, described the Recovery filter as having arms designed for centering and caudal migration resistance.

MR. O'CONNOR: Gay, can you highlight that.

BY MR. O'CONNOR:

- Q Do you see where I'm looking?
- 22 A I do. Does the jury see that? Okay.
 - So the arms of the upper portion of the filter there, and you can see they look like almost sharp little pinpoint needles. So with a horizontal component, which is meant to

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

align with the IVC and help keep the filter aligned along the 09:55:10 1 2 IVC axis, and because they're a little bit pointy, not sharp 3 like a needle, but a little pointy at the bottom of the arm, 4 that is meant to reduce the likelihood of the filter migrating 09:55:28 5 caudally, which means downwards, in a downwards direction, 6 towards the feet. 7 And why is that important? 8 Well, any time the filter moves, and movement in any 9 direction can also include tilting, the filter then can 09:55:41 10 become unstable. It's sensitive to new and different forces, 11 which may then cause the filter to fracture or to fail. 12 So when a device company like Bard says its filter is 13 migration resistant, what does that mean? 14 Well, those are key words that radiologists like to hear, 09:56:02 15 and it makes it sound like it's a good device, because I want 16 the filter to be centered and I want the filter not to move. 17 So that piques my interest, and that's why I was excited at this presentation and thought, wow, based on this 18 information, this looks like something that would be good for 19 09:56:20 20 my patients. 21 Now, in relation to the --22 MR. O'CONNOR: Gay, scroll down to the next line. 23 One size fits all. 24 No, previous page. I apologize. Go back to the page 09:56:32 25 before. One size fits all. I'm sorry.

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

MS. MENNUTI: Here? 09:56:39 1 2 MR. O'CONNOR: Yes, please. BY MR. O'CONNOR: 3 4 The diameter of the vena cava, is that the same in all 09:56:51 patients? 6 Α No. 7 Q What is the range? 8 Depending on the age, size, weight of the patient, the 9 range can be from 5 to 8 millimeters up to 35 millimeters. 09:57:02 10 And does the vena cava distend or contract? The vena cava is a soft tissue structure made of 11 Yes. 12 very, very thin walls, very different than an artery that has 13 thick muscular walls that typically don't change that much in 14 diameter. So a cava can change quite a bit. It's subjected 09:57:23 15 to a number of forces, both in terms of our -- when we lift, 16 when we change position, when we become dehydrated. 17 don't drink enough, the cava can get smaller. And, on the other side of the coin, if we do the opposite things, the 18 cava can get larger, which has an impact, then, on the actual 19 caval size. 09:57:43 20

And the vena cava, as it goes from the level of the

Yes. Typically, the closer you get to the heart, the

larger the cava becomes. And so above the renal veins is the

typical anatomic landmark that we use to place filters. As

kidneys upward, does it change in diameter at all?

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

09:58:05 1 you get north of the renal veins, closer to the heart, the 2 IVC becomes wider in diameter. 3 When Bard indicated that one size fits all, what did that mean to you? 09:58:19 Just a bit of a generic statement. That's really the 6 standard size for IVC filters. There's a few filters that 7 are manufactured to be placed in cavas that are larger than 8 28 millimeters. The majority of filters, the kind of 9 industry standard is to make a filter that is meant to be in 09:58:38 10 an average cava up to 28 millimeters. 11 MR. O'CONNOR: Go to the next page, Gay, page 10. 12 Page 10. There we go. And go ahead and highlight 13 both those bullet points. 14 BY MR. O'CONNOR: Now, Dr. Asch, according to this PowerPoint, it says: 09:59:03 15 16 Hooks strong enough to resist migration, 50 millimeters of mercury in a 28-millimeter IVC. 17 18 Do you see where I read? 19 Α Yes. 09:59:19 20 Did Bard explain to you anything about testing it had done in terms of migration resistance? 21 2.2. They did show me some slides and briefly went through 23 their testing process and made the statements, which I wasn't 24 in a position to substantiate. I took them at their word.

They did testing, they provided this number of 50 millimeters

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of mercury. I didn't question that number. My assumption is 09:59:46 1 2 that that is an IVC filter company, they knew what the 3 standard was, they knew what number was important in order to 4 resist migration. 09:59:59 And was there animal testing done that you're aware of? 6 There was animal testing, but I believe the animal 7 testing was predominantly with respect to does the filter 8 cause damage to the cava wall and can the filter be removed. 9 So before moving from a bench top to humans, they did some 10:00:16 10 animal testing with really, I think, the single question of 11 can this filter be removed without causing caval injury. 12 MR. O'CONNOR: Gay, go to page 22. 13 BY MR. O'CONNOR: 14 It appears there was a discussion about testing on sheeps; 10:00:51 15 is that -- sheep; is that right? 16 That's correct. Α 17 And is that what you were just talking about? In other words, Bard never indicated to you -- there was no testing 18 that you're aware of that tested whether the filter was 19 10:01:04 20 migrating in a sheep; is that correct? I'm not aware of any animal testing other than can the 21 22 filter come out. 23 So the testing on sheep was just limited to putting it in 24 and taking it out.

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I believe so.

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

MR. NORTH: Your Honor, I object. I think he's 10:01:17 1 2 leading the witness. 3 THE COURT: Sustained. BY MR. O'CONNOR: 10:01:23 What was your understanding of the purpose of the sheep study in terms of use of the filter? 6 7 My understanding was it was simply to look at the safety 8 of the device. Does the device cause caval injury, either 9 while the filter is in position or during or after filter 10:01:39 10 removal. Now, in this document, it has said in different places 11 12 12-week removal for the Recovery filter. 13 Do you see that? 14 Α Yes. 10:01:50 15 What does that mean to you? 0 Well, that meant they had demonstrated in an animal model 16 17 that the filter could be removed after 12 weeks. Which is, again, different than the clinical practice of the, at that 18 time, clinically available device which could only -- which 19 10:02:10 20 the manufacturers had tested and was only removable up to ten to 12 days. 21 22 MR. O'CONNOR: Let's look at Exhibit Number 4330, 23 please. 24 BY MR. O'CONNOR: 10:02:40 25 Q Do you recognize Exhibit 4330?

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

10:02:56 1 Α Yes. 2 What is Exhibit 4330? 3 This is my initial letter to the director of the Health Protection Branch of Canada, giving him the background and 10:03:11 5 information that I had in order to request permission to use the filter on compassionate grounds for this pilot study. 6 7 MR. O'CONNOR: Now, I move to admit Exhibit 4330, 8 Your Honor. 9 MR. NORTH: No objection, Your Honor. 10:03:29 10 THE COURT: Admitted. 11 (Exhibit 4330 admitted.) 12 MR. O'CONNOR: May we publish to the jury? 13 THE COURT: Yes. BY MR. O'CONNOR: 14 So, Dr. Asch, this letter's dated July 21, 1999. Did you 10:03:35 15 16 meet with Bard and NMT on more than one occasion? 17 Yes. Α And were there more than one presentations given to you? 18 As I recall, there was only a single formal presentation. 19 The other meetings had to do with the logistics and how to 10:03:55 20 move forward on accruing patients, following the patients, 21 22 and technical aspects of the study. 23 Okay. In the second paragraph it says that you actually 24 visited NMT's manufacturing facility and you had opportunity 10:04:18 25 of inserting and removing devices in sheep models.

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

1 A That's correct.

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- Q When you say that you were satisfied that this is safe and efficacious device, what was that based upon?
- A That was based on the word of the people from NMT and Bard. They gave me the presentation, they gave me the information, and I took them at face value and believed that they told me they had done the testing and told me the device was safe in their animal use and their bench top use. I believed what they told me.
- Q And if you look down where you write to Dr. Freeland that the filter was found to with withstand 50 millimeters of mercury. Do you see what I'm talking about?
- A Yes.
 - Q That was something Bard represented to you?
 - A Yes. Going back to the prior evidence of this submission, the prior document you just showed, I'm just repeating the information that was provided to me by Bard and NMT.
 - Q Did you assume that Bard had studied the anatomy and the dynamics of the vena cava before they came to you about this study?
- A Yes.
 - Q And did you assume that their studies had -- and their testing had been to designed in a way to predict how the filter would act in real life?

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

A Yes.

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- Q Were those among the reasons that you agreed to do this study?
- A Yes, absolutely.
 - Q So explain to the jury the study itself. You had how many patients initially?
- A The initial published study had 32 patients in it.
 - Q And tell us how these patients participated in the study.
- Were they provided with Recovery filters?
 - A Yes.
- 11 Q And were these patients monitored?
- 12 A Yes. These patients were very closely monitored,
- according to a very strict protocol. They had regularly
- scheduled abdominal radiographs to assess the filter in terms
- of position and integrity, and those -- each of those imaging
 - studies was personally reviewed by myself, even though their
 - 17 radiographs may have been reported by another radiologist.
 - 18 In addition, I personally reviewed any imaging study that
 - 19 they had as part of their medical care, which may have been
- 10:07:00 20 over and above the rigorous imaging follow-up that we had as
 - 21 part of the study.
 - Q So the patients that participated signed an informed
 - 23 consent?
 - 24 A Yes, they did.
- 10:07:10 25 Q Did they understand that it was an experiment?

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

A Yes, they did.

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- Q And the patients that participated, did they receive Recovery filters?
- A Yes, they did.
- Q Was there in the protocol a plan as to how long the filters would be in patients before they were removed?
- A Patients who were selected, part of the study protocol was to select patients specifically with a view to removing the filter. So anyone that we thought that we couldn't remove the filter or shouldn't remove the filter, wouldn't get wouldn't be entered into the study and wouldn't get this filter.

So the plan for the study, again, the pilot study to evaluate filter retrievability, was to place filters in patients with the view to retrieving 100 percent of them.

- Q And how were the filters inserted or implanted in the patients?
- A They were inserted using standard radiologic techniques. We put a needle in, put a wire in, put a tube in, inject the dye, check the anatomy, and then put the filter in.
- Q Can you explain to the jury just quickly, briefly, the percutaneous procedure as to how Recovery filters are placed.
- A Different people do things differently, obviously. So my standard of practice is to put the filter into the vein in the leg, femoral vein. So I use an ultrasound machine to

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find the vein. I clean and diffuse the skin. I put a small needle into the vein. When I'm sure in the right place, I put a wire into the vein and I put a tube, a catheter, into the vein in order to inject X-ray dye to assess their anatomy. Is there a blood clot there? Is there anatomic abnormalities? I want to know where the renal vein is. I mentioned that briefly. I want to know where those are in order to know where to put the filter. And once I'm satisfied — and measure the cava. Again, that is key, I want to be sure the cava is less than 28 millimeters.

So once I'm satisfied that it's safe and appropriate to place the filter, then using the device that comes in the package, the standard device, I just put the filter in and release it, all while watching with X-rays.

- Q And then you place the filter in a specific location in the vena cava?
- A Yes.

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Q And then the next step was to wait a period of time -- well, monitor the patients first during the course of the study.

And explain to us specifically how the patients were monitored.

A So the patients were monitored with abdominal radiographs every two weeks. So we all have X-rays when we have tummy pain, so we just took an X-ray of the patient's abdomen. And

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I would look at it to look at the filter, and we compare that with the X-rays I took when I was placing the filter.

So is the filter in the same place? Has it tilted?

Has it moved? Has it fractured? Looking for those

complications in order to identify a complication that may

occur in an asymptomatic patient in order to identify it and

deal with it before an asymptomatic complication becomes a

clinical complication.

- Q And then at some point the intent was to retrieve the filter?
- A It was always the intent to retrieve the filter. This was not a long-term study.
- Q And could you explain to the members of the jury how the Recovery was intended to be retrieved? Removed?
- A So this was a -- we call it Iannella (phonetic) design, different than some of the other designs, so there was a little nub, if you remember seeing at the top of the filter on the last image, and there's, it's called a cone, it's almost like a space shuttle when it docks with the space station.

So through the vein in the neck. So the cone is at the top of the filter. So although I place the filter through the leg vein, because the cone is the top, I need to go through the vein in the neck. So same thing, put a needle in, wire in, tube in, and inject X-ray dye at the beginning,

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again, to be sure that I know where the filter is, look to see if there is any clot present in the filter, look to see if there's any reason that I can't safely take the filter out.

And all things being equal, when it's all safe, I put the special cone device down, essentially grab onto the filter, and then remove the filter through a sheath through a little tube that I've placed in the vein.

- Q At some point in time in the study did you learn of any complications?
- A Yes.

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- Q Tell the jury what you learned and how you learned it.
- A So in Patient Number 9, again, I was reviewing -- he was quite an ill man. I was reviewing some radiographs that he had had outside of the study. So, again, I was paying very close attention to these patients. I noticed on his X-ray that his filter had moved, and that gave me great concern.
- Q Moved in what direction?
- A It had moved -- initially it moved down caudally, towards his feet, and then subsequently cranially, up towards his head.
- Q Did you note how far it moved?
- A Moved approximately 4 centimeters, which is about two inches.
 - Q And how did you feel when you saw that radiograph?
 - A I was very -- I was very concerned. I was concerned for

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DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

I was concerned because this is a brand-new two reasons. filter never been used, and now in Patient Number 9 we have a complication, a filter migration, and because, as the filter -- as we discussed before, as the filter moves up towards the heart, the IVC becomes wider, so once it starts migrating, my concern was it would migrate further, migrate into his heart, migrate into his lungs, where it could ultimately kill him. Did the patient that experienced this complication have any symptoms? He was completely asymptomatic, and this was found Α only because he was part of the study and only because I was personally reviewing all of his imaging studies. What did you do when you saw the radiograph? I did a bunch of things. I can't remember exactly what The first thing I did was probably phone the patient's physician and made arrangements to have the filter removed. And then at some point I contacted the people from Bard and/or NMT to inform them of this complication and let them know what was going on. And then I subsequently, as per ethics protocol, I contacted my hospital ethics review board and I contacted Health Protection Canada, because this is an unexpected complication, unexpected potentially serious complication, and as a result of all those -- that event, the

study was put on hold so that we could investigate.

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10:14:03 1 MR. O'CONNOR: Gay, would you please put up 2 Exhibit 557. 3 Thank you, Gay. BY MR. O'CONNOR: 10:14:35 Dr. Asch, do you recognize Exhibit 557? Yes, I do. 6 Α 7 What is it? 8 So this is an e-mail that I sent. I'm a bit unsure who I sent it to because it looks like it's been copied and pasted 10:14:52 10 and forwarded a number of times. But essentially this is an e-mail that I sent to, I think, the ethics board to inform 11 12 them of the complication that had occurred and outlined the plan that I had as to how I was going to deal with it. 13 14 So this --10:15:11 15 MR. O'CONNOR: Your Honor, move to admit Exhibit 557. 16 MR. NORTH: No objection, Your Honor. 17 THE COURT: Admitted. (Exhibit 557 admitted.) 18 BY MR. O'CONNOR: 19 Now, Dr. Asch, first of all, is this an e-mail that you 10:15:27 20 21 authored? 22 Α Yes, it is. 23 And it's an e-mail that was sent to whom? 24 MR. O'CONNOR: Oh, excuse me. May I publish to the 10:15:39 25 jury, Your Honor?

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

THE COURT: Yes.

THE WITNESS: I believe it was sent to the Health

Canada and to the ethics board. So this has been forwarded a

number of times, so I can't really tell who exactly was it

initially sent to.

BY MR. O'CONNOR:

- Q Is it your belief that initially the e-mail went to the ethics board?
- A Yes.

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- Q And why did you do that?
 - A Number one, because I was concerned about the safety of the device, and, number two, because I'm legally required under the auspices of a research study to inform the ethics board of a serious adverse complication.
 - Q Going on down in this letter, you explained your belief as to why the filter migrated.

Do you see that? It looks like it's the beginning of the second full paragraph.

- A Yes. So I hypothesized that the filter had caught a large clot. We knew that there was a large clot in the filter when I removed the filter. So I hypothesized that the impact, the stress of catching that clot overwhelmed the strength of the hooks and caused the filter to migrate.
- Q Now, did you tell Bard your concerns that this may be -that this complication was serious and could have resulted in

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

death to the patient? 10:17:10 1 2 Yes, I did. 3 And what was Bard's response? They said they would investigate that filter, which was 5 returned to them, and there were a number of conversations we 10:17:18 6 had trying to decide what do we do. Does this one patient 7 out of nine filter migration represent a trend or is it an 8 isolated event? And how do we decide? Do we -- so there's 9 lots of discussion. We decided do we halt the study permanently or continue on with the study. 10:17:41 10 11 Did Bard indicate to you that they were going to look into 12 it? 13 They did. Α And was the study suspended? 14 Q The study was suspended at that time, yes. 10:17:49 15 Α 16 And was it resumed? 0 17 Α It was resumed, yes. And how did you -- how was it resumed? 18 Q 19 Α There were extensive conversations with Bard, NMT, but 10:18:04 20 it's my recollection that, in my view, the -- it was the conversation I personally had with John Kaufman, an American 21 interventional radiologist and experienced in IVC filters, 22 23 and based on the discussion I had with him, we together 24 agreed that it was reasonable to proceed with caution, with

extra monitoring, and with patient information and consent,

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10:18:30 1 we would proceed to see if this was an isolated event or if 2 this was going to happen again. 3 In Exhibit 559 -- excuse me, 557, you stated that, "I 4 believe that the filter migrated due to the impact of the 5 large thrombus and in doing so likely saved this patient's 10:18:49 life." 6 7 Can you explain that statement, please? 8 Well, a large thrombus has the potential to kill a 9 patient. Some -- every patient has different sensitivity to 10:19:03 10 thrombus, but a large clot could kill a patient. So this 11 filter did its job, acted as a filter and trapped that 12 thrombus, preventing it from going to the lungs. But at the 13 same time the filter failed in that it migrated. So the 14 filter didn't do its complete job and stay where I had placed 10:19:21 15 it. 16 So earlier when we talked about it staying in place, being 17 stable, is that what failed in this filter? 18 Α Yes. 19 And I think you said that as the vena cava goes up towards the heart, it becomes larger in diameter. 10:19:42 20 Yes, it did. 21 Α 22 Q And why was that a concern? 23 Because if the filter has already migrated, as the cava Α gets larger in diameter it doesn't have the same resistance, 24

the force of legs that hooks out on the filter wall are going

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to be reduced, making it easier for that filter to migrate 10:20:05 1 2 further. 3 Did you talk to Dr. Kaufman at all about this event? Yes, I did. 10:20:33 Tell us about that conversation. 6 Well, he shared -- he mirrored and absolutely shared my 7 concerns that this experience, this migration is very 8 concerning. But, again, being uncertain as to what the true 9 incidence or frequency of this was, he agreed that the device, in theory, still had potential benefit to patients at 10:20:57 10 11 large, and with very close monitoring in my study and, again, 12 as Bard had suggested initially, subsequently with a 13 follow-up larger study, the hope is that we can identify the true incidence of these and other types of complications. 14 So you continued with the study? 10:21:25 15 0 16 Α Yes. 17 Did you have any other complications? 18 Α Yes. Did you have any complications involving a fracture, 19 10:21:39 20 Dr. Asch? 21 Yes. There was Patient 33 who experienced a filter 22 fracture, including an arm and a hook. 23 Tell us about that patient. Q 24 So that filter was place into a young woman who was

pregnant at the time, and similar to Patient Number 9, her

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fractures?

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filter complication was only noted by myself after I personally reviewed her imaging studies. And, again, the scenario was kind of similar. I found out the complication, the filter fractures in this case, and then made arrangements to have the filter removed as quickly as possible and, again, I contacted the authorities, the Health Protection Branch and my hospital ethics board, informing them of this complication, and I put the study on hold with the support and approval of those governing bodies. MR. O'CONNOR: Gay, could you please put up Exhibit 559, please. BY MR. O'CONNOR: Dr. Asch, can you look at and identify Exhibit 559. Yes. This is a e-mail that I sent which describes the filter fracture. And, Dr. Asch, was the study suspended after this? Α Yes, it was. Again, is this something that you found when you were reviewing radiographs? So I reviewed a radiograph that had been reported normal by the regular diagnostic radiologists. I identified this only because this patient was in the study and I personally reviewed her imaging studies. Did Patient 33 have any symptoms associated with the

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A She was asymptomatic as well.

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- Q Now, eventually did you -- did your involvement end in the study?
- A Yes. So my -- well, the study came to an end, but I think prior to the study ending I had a change in career, if you will. I went from working for University of Toronto to working at the hospital where I am now.
- Q And after the patient, I think that was Patient Number 9 that had the migrating, cephalad migrating filter, and then the patient that had the fracture, did you have any discussions with Bard about any concerns you had about the Recovery filter?
- A Yes. So after each complication I had discussions with Bard and expressed my concern about the filter and repeated the fact that they had promised me from the get-go that there would be a long-term safety study performed on all aspects of the filter. And, again, my study, this study was simply a pilot program.
- Q Did you tell them that whether you -- did you tell them that you did not feel that this filter, the Recovery, was ready to be put on the market?
- A Yes, I did.
 - Q And did Bard -- did anybody from Bard respond to you that, yes, they understood your concerns and that there was going to be a long-term study?

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MR. NORTH: Objection, Your Honor. Leading. 10:25:07 1 2 THE COURT: Sustained. 3 BY MR. O'CONNOR: What was -- did you receive a response about your concerns 4 10:25:13 5 from anybody at Bard? 6 It was my understanding they were going to do two things. 7 One is look at the filter again, particularly with respect to 8 the fracture, and see if there was a design issue that needed 9 to be changed. And, again, always in the background, I was 10:25:26 10 informed that a long-term study was going to be done. 11 And at some point in time did you learn whether a 12 long-term study was done or not? I learned that a long-term study had not been done, but 13 this device had been released for use -- for general use. 14 And how did you learn that? 10:25:54 15 16 On the street. Just through word of mouth. I heard it 17 from other radiologists who said, well, I just put this filter in. I said, oh, that's kind of strange, I didn't 18 think the filter was released for use yet outside of a study. 19 10:26:12 20 Are you doing a study? The answer was, no, they sold me a filter. 21 22 How did you feel when you heard that? 23 I felt betrayed, I felt frustrated, I felt concerned 24 that, particularly given the two, what I consider serious 10:26:24 25 complications in my limited study, that the filter was now in

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fairly widespread use without plans for the study that I had 10:26:28 1 2 initially been promised. 3 MR. O'CONNOR: Gay, could you please put up Exhibit 558. 10:26:50 BY MR. O'CONNOR: Can you identify Exhibit 558, please. 6 7 Α Yes. That is the scientific manuscript that I wrote and 8 was published in the Journal of Radiology after completion 9 of -- which included 32 patients in the study. 10:27:11 10 MR. O'CONNOR: Excuse me. Your Honor, I need to go 11 back to Exhibit 559. 12 Gay, could you please put 559. 13 BY MR. O'CONNOR: 14 Dr. Asch --10:27:19 15 MR. O'CONNOR: At this time I move Exhibit 559 into 16 evidence. 17 MR. NORTH: No objection, Your Honor. THE COURT: Admitted. 18 (Exhibit 559 admitted.) 19 10:27:28 20 BY MR. O'CONNOR: Dr. Asch, is this a notification that you gave the board 21 22 again about the fracture in Patient 33? 23 Yes, it is. Α 24 And after this is when you suspended your study? Q

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Yes.

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

10:27:44 1 MR. O'CONNOR: May I publish this to the jury, 2 please? 3 THE COURT: Yes. 4 BY MR. O'CONNOR: 10:27:47 Dr. Asch, with Patient 33, like Patient 9, did you receive any indication that -- from Bard whether this incident would 6 7 be looked into? Yes, they indicated that both incidents would be looked 8 into. 10:28:20 10 Did you participate in any investigation? No, I did not. 11 Α 12 And were you told at some point in time that the 13 Patient 33 situation was investigated? 14 Α Yes. Did the study resume after that? 10:28:34 15 Q 16 Yes, it did. Α 17 All in all, how many patients participated in this study? I believe there were approximately 56. 18 Α MR. O'CONNOR: Let's display Exhibit 558. 19 BY MR. O'CONNOR: 10:28:48 20 And what is Exhibit 558? 21 22 Again, that is the scientific manuscript that was 23 published in the Journal of Radiology describing the results 24 of the first 32 patients in this pilot study.

MR. O'CONNOR: One moment, Your Honor.

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THE COURT: We are at the 10:30 point, so we're going 10:29:20 1 2 to break for the morning. 3 Ladies and gentlemen, we will resume at 10:45. 4 Please remember not to discuss the case, and we will excuse 10:29:29 5 the jury. 6 (Recess was taken from 10:29 to 10:45. Proceedings 7 resumed in open court with the jury present.) 8 THE COURT: Thank you. Please be seated. 9 You may continue, Mr. O'Connor. 10:46:37 10 MR. O'CONNOR: Thank you, Your Honor. BY MR. O'CONNOR: 11 12 Dr. Asch, your initial study I think you said involved thirty-some patients. 32? 13 32 patients were published as far as the initial study, 14 10:46:51 15 yes. 16 Did actually more patients participate in your study? 17 Α Yes. During your study did you see other complications? 18 Q. Yes, I did. There were a number of complications, yes. 19 Α Did you, for example, see a number of procedural 10:47:01 20 21 difficulties? 22 Α Yes. 23 Were those recorded? Q 24 Α Yes, they were.

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Reported to Bard?

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

- 10:47:09 1 Α Yes. 2 Q Did you see tilts? 3 Yes. There were possibly five filter tilts. Α And tilt, for the jury, again, is what? 10:47:18 Tilt is the filter is angled with respect to the caval 6 axis, and for purposes of definition for this study, tilt was 7 greater than 15 degrees. 8 And is there any risk or concerns about tilt as a filter failure? 10:47:36 10 Yes. Tilt has potential serious complications, results, in terms of filter fracture, filter migration, and filter 11 12 failure. And what is that? 13 MR. NORTH: Your Honor, objection. No disclosure as 14 10:47:48 15 an expert witness. 16 THE COURT: Overruled. 17 THE WITNESS: Can you repeat the question? BY MR. O'CONNOR: 18 Sure. In terms of those risks, what are they? 19 Filter fracture, potential migration, potential failure, 10:48:00 20 which means the filter won't trap a clot and it can go to the 21 22 lungs and cause injury or death.
 - 23 Q And did you see perforation?
 - 24 A Yes.

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Q Was that a serious complication?

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- 10:48:17 1 A Yes, that's a potential serious complication.
 - 2 Q You told us about the cephalad migration you saw in
 - 3 Patient 9.
 - A Yes.
- 10:48:25 5 Q And did you see caudal migration in patients?
 - 6 A Yes.
 - 7 Q Was that also in Patient 9?
 - 8 A Yes.

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- Θ lacksquare Q You learned that the filter went down and then up.
 - A That's correct.
- 11 Q And is that a serious complication?
- 12 A Yes. Any filter movement is a potential serious
- 13 complication.
- Q And then you saw an arm fracture and a leg hook fracture
- 10:48:46 15 I in Patient 33?
 - 16 A That's correct.
 - 17 Q And that concerned you as well?
 - 18 A Very much.
 - 19 Q Is fracture a serious complication?
- 10:48:54 20 A Yes.
 - 21 Q And what types of risks can that present to a patient?
 - 22 A Well, that renders the filter unstable. The filter could
 - 23 then fail and allow blood clots to get to the lungs. The
 - filter fragment could migrate to the heart or the lungs
- 10:49:10 25 and/or the bulk of the filter could migrate to the heart or

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the lungs, where it could cause serious problems.

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- Q In the patients where you observed these failure modes in, these are all on radiographs; is that right?
- A Yes. These are all asymptomatic patients, detected on radiographs.
- Q Asymptomatic. If a patient, from what you're experiencing in this study, had a failure that was asymptomatic, is that any reason that a doctor should not be concerned?
- A No. I consider myself lucky when I find an asymptomatic problem, complication, of the filter or an asymptomatic mass in someone's pancreas because we like to identify it before it becomes symptomatic because once it's symptomatic it's often too late to avoid pain and suffering.
- Q Let me switch gears on you, Doctor. Did Bard at any time ever indicate to you that they would use intended to use your study for purposes of establishing substantial equivalence for a 510(k) application to get it cleared by the FDA here in the United States?
- A They never informed me of that, no.
- Q If Bard had asked you, would you have given them permission?
- A I would have denied permission because this study was, again, designed as a pilot study to access retrievability of the device and was not meant to assess safety, long-term in-dwelling safety as a permanent filter. So this study

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would not be appropriate to -- for that submission.

- Q Did Bard ever contact you and tell you that Bard intended to use your study to establish substantial equivalence for a 510(k) application to get the Recovery cleared through the FDA?
- A They never spoke with me about that.

MR. O'CONNOR: Gay, would you display Exhibit 5189, please.

And, Gay, would you turn to page 0029.

BY MR. O'CONNOR:

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- Q Dr. Asch, have you ever seen this document before?
- A I believe I've seen it in prior court, but I had not seen it as part of my clinical practice or in conversation with Bard.
 - Q Have you ever seen a 510(k) application that included your study and made a statement that Dr. Asch's data relative to complications during filter placement, recurrent pulmonary embolism, death, filter migration, et cetera, provide clinical data to support a determination of substantial equivalence as a permanent filter?
 - A I was not aware of any of this at the time of the writing of this document.
 - Q And would you have authorized Bard to use or make any statement to the FDA?
 - A I would not have done so.

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And if Bard did, what's your response? 10:52:45 1 Q 2 I would be disappointed and concerned because that opened 3 the door towards the widespread use of a device that hadn't 4 been appropriately tested and puts patients at risk. MR. O'CONNOR: At this time I would move for 10:53:03 5 admission of 5189, Your Honor. 6 7 MR. NORTH: No objection, Your Honor. 8 THE COURT: Admitted. 9 (Exhibit 5189 admitted.) 10:53:12 10 MR. O'CONNOR: Publish to the jury? 11 THE COURT: You may. 12 MR. O'CONNOR: Gay, could you please go back to the 13 first page. BY MR. O'CONNOR: 14 Dr. Asch, this document's entitled Recovery Filter System 10:53:32 15 Special 510(k) Submission. 16 17 Do you see that? Yes, I do. 18 Α Are you knowledgeable or have any expertise in the 19 10:53:45 20 clearance process of 510(k)? I have no knowledge or expertise in this area. 21 Α 22 MR. O'CONNOR: Gay, turn to page 5189.0029, please. 23 In the third paragraph highlight "however." The 24 sentence beginning "However," Gay, right there at the end. 10:54:18 25 All the way down. Thank you.

DIRECT EXAMINATION - MURRAY R. ASCH, M.D.

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0:54:20	1	BY MR. O'CONNOR:
	2	Q Dr. Asch, was your pilot study to study the
	3	implantability, retrievability, of the Recovery filter ever
	4	designed to or intended to establish substantial equivalence
0:54:32	5	for the Recovery as a permanent filter?
	6	A That was never the aim of the study. The study was not
	7	designed to do that.
	8	Q And did you ever authorize Bard to represent to any
	9	government agency here in the United States that the purpose
0:54:48	10	or the intent of your study to was establish substantial
	11	equivalence for clearance in the FDA?
	12	A I would never have authorized this study to be used for a
	13	submission like this.
	14	Q Why?
0:55:03	15	A The study wasn't designed for that. It's inappropriate
	16	to draw conclusions and make statements about a study when
	17	that wasn't the initial stated goal of a study. So my study
	18	didn't demonstrate this.
	19	Q Your study was never intended to be any type of safety and
0:55:22	20	efficacy study. Is that fair?
	21	MR. NORTH: Objection. Leading.
	22	THE COURT: Sustained.
	23	BY MR. O'CONNOR:
	24	Q Was your study intended to establish safety or efficacy?
		46

A No. The single goal of the study was to establish

10:55:32 25

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

whether or not the filter could be safely retrieved.

MR. O'CONNOR: Thank you. No further questions.

THE COURT: Cross-examination.

MR. NORTH: Yes, Your Honor.

CROSS-EXAMINATION

BY MR. NORTH:

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- Q Good morning, Dr. Asch.
- A Good morning.
 - Q Your involvement with Bard that you have discussed today concerned the Recovery filter; is that correct?
- 11 A That's correct.
 - Q And your study was conducted in approximately the 2000 to
- 2002 time frame; correct?
 - A That's correct.
 - Q And it only involved, that clinical study, the Recovery filter; right?
- 17 A Yes.
 - Q And, in fact, you have had no dealings with Bard, as I understand it, for 13 years, since 2005.
 - A That's incorrect. I and -- my department and I use other -- I use a variety of Bard products, so I've got a regular relationship with Bard.
 - Q But you have had no relation -- you have not spoken with anybody at Bard about filters since 2005, have you?
 - A No, my sales representatives constantly come around and

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

show me the new filters and we talk about filters all the 10:56:51 1 2 time. 3 But you have done no studies for Bard at all since 2000 -since this study in 2002; correct? 10:57:02 That's correct. I have done no studies since that time. 6 And you have not been involved at all in the development 7 of the G2 filter, were you? 8 That's correct. And you did not conduct any study of the G2 filter, did 10:57:15 10 you? 11 Α That's correct. 12 And you have not had any involvement with Bard in the 13 development of its third generation retrievable filter, the 14 G2X, have you? 10:57:26 15 That's correct. Α 16 And you did not conduct a clinical study regarding the G2X 17 filter; correct? That's correct. 18 Α And, similarly, you've had no involvement with Bard in the 19 10:57:37 20 development of the Eclipse filter that was introduced to the market in 2010; correct? 21 22 Α That's correct. 23 And you did not conduct any clinical study on the Eclipse 24 filter that was the model of filter implanted in Ms. Jones,

10:57:52 25

did you?

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

- 10:57:54 1 A That's correct.
 - 2 Q And, in fact, as I understand it, you have not even used
 - 3 in your practice a Bard filter since approximately 2005;
 - 4 correct?

10:58:06

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- A That's correct.
- 6 Q Now, you flew from eastern Canada to Phoenix to testify
- 7 here today; correct?
- 8 A Yes, I did.
 - Q My understanding is you said you were going to be paid
 - \$5,000 a day for your time?
- 11 A Yes.
- 12 Q And that your involvement to come here today to testify
- 13 will be a total of four days?
- 14 A Four. Equivalent of four days of missed work.
- 10:58:48 15 Q So you are going to be charging the plaintiffs \$20,000 for
 - 16 this court appearance?
 - 17 A I'm charging the same amount I charge for any testimony
 - or involvement with any other company I've worked with.
 - 19 Q And for this particular appearance, that is \$20,000;
- 10:59:07 20 correct?
 - 21 A Yes, that is what I'm charging. Yes.
 - 22 Q In fact, you have appeared to testify for these
 - 23 plaintiffs' attorneys in the past; correct?
 - 24 A That's correct.
 - Q And each time you have appeared to testify for these

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

attorneys, you have charged either \$5,000 a day or 6- or \$700 10:59:21 1 2 an hour; correct? 3 That's the standard rate I've charged for the last 15 years of my practice. 10:59:36 And as early as 2013, you consulted with Mr. Lopez on the 6 plaintiff's team to prepare a declaration in another matter 7 pending in California; correct? 8 Yes. 9 And in working -- in consulting with Mr. Lopez in that case, you likewise charged your normal rate of \$5,000 a day or 10:59:54 10 6- or \$700 an hour; correct? 11 12 My charges are consistent for anyone I work with. 13 As I understand it, while you continue to utilize IVC filters, you have not published any article concerning IVC 14 filters since at least 2005; correct? 11:00:17 15 16 That's correct. 17 And over the years you've also done some consulting work with one of Bard's competitors that also makes IVC filters, 18 the Cook Medical Group; correct? 19 11:00:40 20 Yes. I consult and continue to consult with a number of 21 different device companies. 22 And that includes Cook concerning their competitive 23 filters; correct? 24 It does, yeah. Α 11:00:51 25 Q And you have performed studies for Cook regarding their

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

filters; correct? 11:00:54 1 2 I have performed studies for many different medical 3 device companies, yeah. Now, when you first became involved with the Recovery filter and NMT, Nitinol Medical Technologies, you met with 11:01:11 Dr. Morris Simon; correct? 6 7 Α Yes. 8 And Dr. Simon was the inventor of the Simon Nitinol filter, wasn't he? That's my understanding, yes. 11:01:24 10 Α 11 And you've utilized I believe, as you told us, the 12 Simon Nitinol filter as a part of your practice? Yes, I did. 13 Α But it did not have the added benefit of being a 14 11:01:38 15 retrievable filter; correct? 16 That's correct. 17 And did you consider the use of a retrievable filter to be a positive development in the medical options you had to treat 18 19 patients? Yes. I believe that temporary filters have great 11:01:51 20 21 benefits to patients. 22 Now, during the course of your work on this study 23 concerning the Recovery filter, you worked very closely with 24 Mr. Rob Carr from Bard; correct?

11:02:11 25

Α

Yes, that's correct.

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

- 11:02:13 1 And I believe, as you have told us before, you consider 2 Mr. Carr to be helpful, supportive, creative, and having 3 everybody's best interest in mind; correct? That has been my belief, yes. 11:02:26 And I believe you also told us that you considered him to be a man of great integrity. 6 7 Α That was my impression, yes. 8 Your initial study, as I understand it, involved 32 patients; correct? That was the initial published study, yes. 11:02:44 10 Α But you continued to look at patients and ultimately, as a 11 12 part of the formal study, implanted the device in 58 total; correct? 13 Yes. Correct. 14 And after implanting in 58 patients, you continued 11:02:59 15 yourself to utilize the Recovery filter in additional patients 16 as part of your practice for a while; correct? 17 Yes, I did. 18 Α And so is it fair to say that you probably implanted the 19 Recovery filter in as many as 80 patients? 11:03:18 20 I would say after I left the study, after I left 21 Mount Sinai Hospital, it was probably on the order of ten 22 23 filters. 24 So between 65 and 70 total?
 - A I wasn't the one who inserted all the filters. Part of

11:03:36 25

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

the study I had a colleague who worked with me. 11:03:40 1 2 Well, as part of your study, you at least were familiar 3 with 58 patients that received the Recovery filter, whether you personally implanted the device or not; correct? 11:03:52 That's correct. 6 And then you implanted it in your own practice in an 7 additional ten paying patients or so? 8 Yes. Α So approximately 68 total patients with the Recovery 11:04:02 10 filter you were familiar with. 11 Α Yes. 12 And of those 68, there was only that one incident of 13 fracture; correct --That --14 Α -- one patient? 11:04:13 15 Q 16 Α Yes. 17 Of those 68, there was only that one incident of migration; correct? 18 That I'm familiar with. Again, I left the hospital so I 19 11:04:24 20 don't have follow-up information on the patients after I 21 left. 22 But based on what you know as you sit here today, out of 23 the 68 patients that you were familiar with and worked with, 24 only one had a migration and only one had a fracture; correct? 11:04:43 25 Α Yes.

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

- 11:04:45 1 Q And you mentioned this with Mr. O'Connor. Both the
 2 patient that had the fracture and the patient that had the
 3 migration were asymptomatic; correct?
 - A Yes, they were.

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- Q That means they didn't have any pain, any visible injury, anything that made them aware of any complication in that filter.
- A Yes, which can be a good thing or a dangerous thing.
 - Q But, in other words, neither of those patients suffered any physical pain because of the complication with their filter.
- 12 A They did not suffer because I was able to intervene and 13 remove the filter prior to them becoming symptomatic.
 - Q Patient 33 was the patient who had had the fracture; correct?
 - A Yes.
 - Q And I believe that was a woman who was pregnant at the time?
 - A That's correct.
 - Q And did you have any suspicion or belief in investigating that incident that her pregnancy or childbirth may have had some relationship to the fracture?
 - A Well, I think in some of the e-mails that I had sent, I think I alluded to that. But on the other hand, filters are placed in pregnant patients on a widespread basis and yet

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

filter fractures outside of this device had been previously 11:06:17 1 2 uncommon to the point I've never seen them. 3 After you completed the study or left the hospital in Toronto and went into the private practice, you were no longer participating with Bard in the formal study; correct? 11:06:36 That's correct. 6 7 And because of that, you were under no contractual 8 obligation to continue placing Recovery filters; correct? That's correct. So when you placed that additional ten filters as part of 11:06:49 10 11 your practice, you did so knowing that no long-term safety and 12 efficacy study had been performed; correct? That's correct. 13 MR. NORTH: If we could look at Exhibit 556, which 14 has been previously admitted. 11:07:28 15 Your Honor, if we could display that to the jury? 16 17 THE COURT: You may. 18 MR. NORTH: Thank you, Your Honor. And if we could turn to page 5 of this exhibit. 19 11:07:45 20 BY MR. NORTH: This is the exhibit that Mr. O'Connor discussed with you 21 22 as a part of your direct examination; correct? 23 Yes. Correct. Α 24 And this is the protocol for the study that you conducted 11:07:56 25 with regard to the Recovery filter; is that correct?

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

A That's correct.

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Q And if we could look at the first paragraph under the section Background.

In the protocol for the study, it was recognized that long-term complications such as filter strut failure or perforation cause hesitancy to use these devices in children and young adults; correct?

- A Correct.
- Q And it talked about the need to develop a filter that could be left in longer than just a week or two; correct?
- A Yes.
- Q In fact, it says currently temporary or retrievable devices must be removed prior to two weeks post insertion.
 - A Yes.
 - Q And then concludes by saying that without -- with this very narrow window, relatively few patients are truly candidates for temporary filters; correct?
 - A Correct.
 - Q And so that was one of the benefits of the Recovery filter, it was going to be the first filter available to doctors that could be left in for an extended period of time and then still retrieved; correct?
- A That's correct.

MR. NORTH: If we could look at Exhibit 557, which I believe has been previously admitted, and I would ask this be

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

published to the jury.

THE COURT: You may.

BY MR. NORTH:

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- Q As you mentioned earlier in that second paragraph, you believe that this filter, even though it the paragraph below that, I'm sorry even though it migrated, you believed it did so because of a large thrombus or clot; is that correct?
- A That was my belief, yeah.
- Q And you believed it likely saved the patient's life.
- 11 A Potentially, yes.
- Q And you go on a couple of lines down to note that "I believe that this is an isolated event and that filter migration is a known complication of all currently approved
- 11:10:48 15 devices." Correct?
 - 16 A Correct.
 - Q Now, Mr. Rob Carr, who we talked about a few moments ago, he was involved in the investigation of this event; correct?
 - 19 A Yes.
 - Q Now, and this event was reported to authorities or the administration at the hospital you worked in; correct?
 - 22 A That's correct.
 - Q And it was reported to the Canadian authorities from whom you had obtained permission to conduct this study?
 - A That's correct.

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

And after the investigation was concluded and reported to 11:11:32 1 2 the Canadian authorities, they permitted you to continue the 3 study; correct? Yes. And you were willing to do so; correct? 11:11:40 With the proviso that patients were informed and there 6 7 was more rigorous follow-up. 8 As we just saw when looking at this protocol, before you 9 ever started this study, filter fracture was a known complication of IVC filters; correct? 11:12:02 10 11 Α Yes. 12 And as you did with the migration, when the fracture occurred in Patient Number 33, you reported that to the 13 authorities at your hospital; correct? 14 That's correct. 11:12:16 15 Α 16 And you reported it to the Canadian regulatory authorities 17 that had given you permission to conduct this study? That's correct. 18 Α 19 Are you aware that NMT or Bard conducted an investigation 11:12:45 20 of that incident? 21 Α They informed me they were going to do so. And did they inform you of the results of that 22 23 investigation? Of the fracture? 24 Α

11:12:53 25

Q

Yes.

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

It was my understanding that that investigation 11:12:53 1 2 concluded that there, I'll say, was an issue with respect to 3 the welding of the device and they were going to make changes in the device manufacturing process. 5 Didn't -- did they also tell you or were you aware that 11:13:08 6 their investigation concluded that the natural anatomy, 7 anatomical forces of labor and childbirth precipitated the 8 fracture of the filter? 9 I'm not sure their investigation was targeted to make that conclusion. Again, IVC filters are placed commonly in 11:13:31 10 11 pregnant women and they don't typically fracture. 12 Do you -- are you aware of the fact that after they concluded their investigation with this and before they ever 13 began selling the Recovery filter on the market, they revised 14 11:13:49 15 the instructions for use to give specific instructions to 16 doctors as to how to place the filter, if they chose to do so, 17 in a pregnant woman? I have become aware of that document and those are the 18 instructions that are the standard instructions for any IVC 19 11:14:06 20 user for any other device in pregnant women. Well, are you aware of the fact they made that change to 21 22 their instructions for use specifically based on the 23 investigation they conducted of the incident in your study? 24 I'm aware they revised the instructions for use.

MR. NORTH: If we could bring up Exhibit 558, please.

11:14:32 25

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

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BY MR. NORTH:
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          2
                  Mr. O'Connor briefly started discussed this publication
          3
               with you. Do you recall this publication?
                   Yes, I do.
                   And, in fact, you are the author of this publication;
11:14:48
          6
               correct?
          7
               Α
                   Yes, I am.
                   And it is entitled Initial Experience in Humans with a New
          8
               Retrievable Inferior Vena Cava Filter?
                   Yes.
11:15:04 10
               Α
         11
                   And this was published in the medical journal called
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               Radiology in 2002; correct?
         13
               Α
                   Yes.
                  And you're familiar with the medical journal Radiology?
         14
               Q.
                  Yes, I am.
11:15:15 15
               Α
         16
                   I believe, if you look over on the left, you initially --
         17
               on the first page, initially submitted this to the journal in
               November of 2001; correct?
         18
         19
               Α
                   Yes.
11:15:31 20
                   And a couple of months later, the editors of the journal
               specifically asked you to revise this; correct?
         21
               A Yes, that's correct.
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         23
                   And you would agree that the journal, medical journal
         24
               Radiology, is a well-respected authority in your particular
11:15:54 25
               field; correct?
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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

11:15:55 1 A Yes.

11:16:04

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- 2 Q It publishes peer-reviewed articles written by doctors
- 3 like yourself who are reporting on studies or observations
- 4 they have made in their practices?
 - A Yes.
- 6 Q And people in your field rely upon journals like
- 7 Radiology; correct?
- 8 A Yes, they do. We all do.
 - Q Now, at this time when you published this article, you're publishing it on the first 32 patients in your study; correct?
- 11 A Yes.
- MR. NORTH: If we could look at page 843.
- 13 BY MR. NORTH:
- Q In looking in the middle paragraph, Dr. Asch, middle
 column, you note for the readers in the Radiology journal that
 there was a single occurrence of asymptomatic filter migration
 in this series of 32 patients; correct?
 - 18 A That's correct.
 - MR. NORTH: And then if we could turn to the final page and the final paragraph.
 - 21 BY MR. NORTH:

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11:17:14 20

- Q Dr. Asch, in this study -- in this article, you state, and let me quote, "In conclusion, this preliminary, special-access use of the RNF," Recovery filter, "a retrievable IVC filter,
- 11:17:43 25 suggests that the filter can easily be delivered via a femoral

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

vein." Correct? 11:17:48 1 2 Yes. And you further note it can be removed percutaneously up 3 to 134 days after insertion; correct? 11:18:02 Α Yes. 6 0 And then --7 MR. NORTH: If we can show the whole paragraph there. 8 No -- that's fine. I'm sorry. 9 BY MR. NORTH: 11:18:13 10 And then you state -- in conclusion in this article you state, "No substantial complications were encountered in this 11 series." Correct? 12 13 Well, I did say that, but at the top of that paragraph it 14 clearly says "preliminary study" and "suggests that." Which, 11:18:35 15 again, in my mind, support the initial feeling that this was 16 a preliminary study meant to pave the way for a long-term 17 study. But even after telling your readers and the readers of 18 this author -- this article, that there had been a migration, 19 11:18:55 20 the migration you talked about with Mr. O'Connor, you published in this journal "No substantial complications were 21 22 encountered in this series." Correct? 23 Yes, that was what was written. Α 24 MR. NORTH: Let's look, if we could, at Exhibit 555.

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

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BY MR. NORTH:
11:19:34
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                  This is another article or letter to the editor to a --
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              excuse me, to a medical journal that you wrote; correct?
                  Correct.
11:19:46
                  And you are one of four authors of this letter; is that
          6
               correct?
          7
              Α
                  Yes, I am.
          8
                 And the other three authors are -- were colleagues of
              yours at the University of Toronto; is that right?
11:19:58 10
                  Yes.
              Α
                 And what journal was this published in?
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               Q
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                  I think was that the Journal of Thrombosis and
         13
              Haemostasis.
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                  Do you consider that a reliable journal?
               Q
11:20:20 15
                  Yes, I do.
              Α
         16
                  Is it one you consult on occasion in your practice?
         17
              Α
                  Yes.
                  And does it publish peer-reviewed articles and other case
         18
         19
              reports?
11:20:28 20
              A Yes, it does.
                  In this particular letter to the editor of this journal,
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               it's entitled Temporary Inferior Vena Caval Filter Use in
         22
         23
              Pregnancy; correct?
         24
                  Yes.
               Α
11:20:50 25
               Q.
                 And you talk in this article about Patient Number 33 who
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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

had the fracture; correct?

A Yes.

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MR. NORTH: And if we could go over to the second page, please, in the right column, the paragraph beginning "There."

BY MR. NORTH:

- Q After telling the readers in this letter about Patient
 Number 33, the pregnant woman in your study, and the fracture
 of her filter, you and your colleagues stated there was -"There were no significant complications in the use of the IVC
 filter in our patients." Correct?
- A In this limited series of 58 patients, yes.
- Q So even though in that 58 patients you had this migration you talked about and you had this fracture that you talked about, you are telling the medical community that you did not consider those to be significant complications; is that correct?
- A Yes. And I have to say I feel embarrassed by these things, and I have to say these articles were written to help pave the way towards a longer term big study, and that's why I wrote them. And I would have -- I sadly downplayed the complications that did occur that are significant. And, again, those were stated simply to facilitate a bigger study.

 Q So you're telling us that you believe those complications

to be significant but you downplayed them, as you just said,

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

to the medical community? 11:22:25 1 2 Well, they were downplayed because early on experience 3 with only 58 patients we don't know, with those complications 4 in 58 patients, two complications in 58, is that the sign of 5 worse things to come in the future with more widespread use 11:22:41 6 of the device? 7 After talking about the filter fracture, you stated that 8 this is a commonly accepted complication of IVC filters; is 9 that correct? Yes. If you read the literature, IVC filter fracture is 11:22:58 10 11 listed as a complication. But in my experience prior to this 12 and in 20 years of practice before and after this, I have never seen a filter fracture personally. 13 And your colleagues go on to report that fracture has been 14 previously reported with the Simon Nitinol filter in up to 11:23:18 15 16 14 percent of patients; correct? 17 That is what it says there, yes. In talking about Patient Number 33, the pregnant woman 18 whose filter had fractured, you noted that she remained 19 11:23:45 20 asymptomatic for 18 months following the filter removal; 21 correct? 22 Yes. She was asymptomatic because the filter had been 23 removed.

And then you go on in this article to the medical

community and talk about the filter migration incident; right?

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11:23:59 25

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

11:24:01 1 A Yes.

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- 2 Q Patient 9.
- 3 A Yes.
 - Q And you told the medical community there was a minimal degree of filter migration in the second case which had no clinical consequences; correct?
 - A Yes.
 - Q And so after this study has been completed and even though you've had this fracture and even though you've had this migration, you tell the medical community that these were not significant complications, that the fracture patient remained asymptomatic, and that the migration patient had no clinical consequences; correct?
 - A Yes. I've already apologized for those statements. But at the end of this I did clearly state that follow-up abdominal imaging is essential to ensure that there is no more serious clinical complication.
 - MR. NORTH: Okay. If we can go down to the final paragraph, please.

BY MR. NORTH:

Q Towards the end of this you conclude and you tell the medical community in this letter, or article, that "The novel Recovery filter device is an attractive option when peripartum circumstances might extend the duration during which caval interruption should be maintained"; correct?

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

11:25:35 1 A Yes.

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- 3 A In this particular case, yes.
 - Q You're telling the medical community this device is an attractive option for pregnant women, already knowing you had one incident of fracture and one incident of migration in your study?
 - A Yes. But, again, these are articles that are written with the understanding Bard was going to perform a larger study and not rely on a case -- case reports from 58 patients.
 - Q But you didn't say that in this article, did you?
- 13 A And I apologize for that.
 - Q And you just told the medical community that despite your experience or based on your experience in your study, you thought this was a viable attractive option for use in patients; correct?
 - A I did say that.
 - Q Now, you testified earlier, Dr. Asch, that you did not know that Bard was going to cite your study to the FDA; correct?
- 22 \blacksquare A For substantial equivalence for a permanent filter, yes.
- Q You have no evidence that Bard misrepresented any aspect of your study to the FDA; right?
 - A My study wasn't meant to demonstrate permanent safety.

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

Q That was not my question, Doctor.

You have no evidence or reason to believe that Bard misrepresented anything about your study to the FDA.

- A Well, the document that has been previously entered as an exhibit makes -- makes an unsubstantiated claim referring to my study, so, yes, that is evidence.
- Q Are you aware of the fact that Bard advised the FDA of the fracture incident in your study?
- A No.

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- Q Are you aware of the fact that Bard advised the FDA of the migration incident in your study?
- A I'm not aware of what Bard has communicated to the FDA.
 - Q Are you aware that Bard, in the instructions for use provided to every physician who bought the Recovery filter after your study was completed, that they described your study in the instructions for use?
- A I believe I'm aware of that.
 - Q And are you aware that in the instructions for use, Bard told physicians who were using this filter that in your study there had been a report of one fracture incident?
- A I believe I recall that.
- Q And are you aware that in the instructions for use provided to every doctor who purchased this or used this, it referenced the one migration incident in your study?
- A I believe so.

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

MR. NORTH: If we could bring up Exhibit 567. 11:28:49 1 2 BY MR. NORTH: 3 Are you familiar with Exhibit 567? Yes. This is a letter that you wrote and signed; correct? 11:29:02 Yes, it is. 6 Α 7 And it was written under your letterhead or stationery 8 from Mount Sinai Hospital in Toronto; correct? Yes. Α And did you maintain this letter as a part of your files 11:29:20 10 at Mount Sinai? 11 12 Yes. When was I was at Mount Sinai. And did you prepare this letter as a regular part of your 13 business or work or practice as a radiologist consulting and 14 performing studies? 11:29:40 15 A As a regular part, no. I was specifically asked to 16 17 provide this letter by Bard. But you would prepare communications for various people as 18 a routine part of your work as a consultant or conducting 19 11:29:55 20 studies of various sorts; correct? I have never been asked and I have never provided a 21 22 letter of support for any portion of an approval process for 23 any government agency. 24 But that's what this letter is, isn't it? It's a letter 11:30:10 25 of support for a -- to a government agency; correct?

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

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11:30:14
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              Α
                   Yes, it is.
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                        MR. NORTH: Your Honor, at this time we would tender
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               Exhibit 567.
                        MR. O'CONNOR: No objection.
11:30:23
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                        THE COURT: Admitted.
                    (Exhibit 567 admitted.)
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                        MR. NORTH: Could we display to the jury, Your Honor?
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                        THE COURT: Yes.
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              BY MR. NORTH:
                   This letter was written on March 10 of 2003. Dated then;
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         11
               correct?
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               Α
                  Yes.
         13
                 And if we could look at the first paragraph.
         14
                        You state "It is with great pleasure that I write
11:30:50 15
              this letter in support of Bard's application for approval of
               its Recovery IVC filter system." Correct?
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         17
                   I try to be polite in my letters, yes.
              Α
                  I'm sorry, what?
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               Q
                   I try to be polite in my letters.
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              Α
11:31:19 20
                   And at the time you wrote this on March 10 of 2003, you
              had already completed your study of 58 patients; correct?
        21
         22
              Α
                   Yes.
        23
                   And you had already observed the migration incident and
         24
              the fracture incident; correct?
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11:31:34 25

Α

Yes.

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

11:31:35 1 Q And you knew that this letter was going to be provided or utilized with the United States Food and Drug Administration as a part of Bard's application; correct?

4 Yes. I believed it was an application for use as a

retrievable device, not as a permanent device.

MR. NORTH: Let's look at the paragraph towards the bottom that begins "I strongly believe."

BY MR. NORTH:

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Q After completing your study, you wrote in a letter that you knew that Bard was going to submit to the FDA, and I quote: I strongly believe that the development of this retrievable IVC filter represents one of the most important advances in the field of interventional radiology in the past 20 years; correct?

A Yes.

- Q And you further stated "I further believe that this filter will positively change the way we treat patients with venous thromboembolic disease, a common affliction with significant impact on morbidity and mortality of our nation." Correct?

 A Yes.
- Q Even after completing your study and even knowing a long-term study that you talked about had not been undertaken, you put in this letter for government authorities there is a definite need for this device to be readily available to patients in Canada; correct?

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

- A Yes. There is definite need and there is great potential for benefit. But, again, all of that is based upon a study demonstrating true safety of the device, and that was the intention of this letter.
- Q You did not tell -- in this letter say a word about conditioning your approval or your support of this device until such time as an additional clinical study had been performed; correct?
- A That's correct.

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- Q And, in fact, in the final paragraph you advised the government authorities, "I would be most happy to meet with you to further discuss my experience with this filter, and to answer any questions or concerns that you may have." Correct?

 A Yes.
- Q So, Dr. Asch, you knew that Bard was going to cite your study to the FDA in its application for clearance for this device; correct?
- A It was my understanding they were going to use it as a temporary device to pave the way for the study that we had talked about from the beginning.
- Q But you didn't mention that understanding in this endorsement letter, did you?
- A That's correct. I, at this point, so many years later, I don't recall what extent of coaching may or may not have occurred. The letter is really fairly vague. It's

Case 2:15-md-02641-DGC Document 11391 Filed 06/08/18 Page 95 of 254

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

enthusiastic in support of the concept of the device, and 11:34:40 1 2 looking at it now, there are different words that I probably 3 should have used. But this is the letter. You told us earlier you were downplaying your concerns in articles distributed to the medical community worldwide. Were 5 11:34:56 6 you also downplaying your concerns to the federal and Canadian 7 governmental authorities? 8 Again, downplaying may be a bit of an overstatement. 9 was tempering them based on the potential benefit of the device. Again, always in the background of the belief that a 11:35:18 10 11 long-term study was going to be done, and I didn't want to 12 jump to any conclusions and end the potential use of this device without a proper study. The study I did was not meant 13 to detect complete safety of this device. 14 But nowhere in this letter, Exhibit 567, did you tell the 11:35:38 15 government that you believed a longer term study needed to be 16 17 conducted before this device was readily available to 18 patients; correct? 19 I neglected to say that, that's correct. 11:35:58 20 THE COURT: Redirect. 21 MR. O'CONNOR: May we approach? 22 THE COURT: Yes. 23 If you want to stand up, ladies and gentlemen, while 24 we talk for a minute, feel free. 11:36:03 25 (Bench conference as follows:)

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

MR. O'CONNOR: Your Honor, I believe the defense has opened the door. It made a big deal what he did after the study and the fact of the matter is he's not been able to tell his entire story that he stopped using Bard filters and he stopped using them because of reports of death that he was reading about.

THE COURT: What's your response?

MR. NORTH: Your Honor, all I asked him was whether he continued to do those ten filters after he knew about the fracture in the study and the migration in the study. I did not get into depth -- I didn't even ask him why he ultimately discontinued use of Bard filters.

THE COURT: Let me ask a different question, Mr. O'Connor.

During the break I went back to the Booker trial transcript to look at what Dr. Asch said on this. And at Docket 10 -- 10493, which is the Day 2 afternoon transcript from Booker, you asked him about this issue. The way you phrased it, there was a longer question, but at the end it was, "Did you learn things about the clinical experiences of your colleagues with the Recovery filters?"

Objection, hearsay.

I sustained the hearsay objection.

So that raised in my mind the question how do you intend to get in evidence that he heard from others that there

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

were death problems?

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MR. O'CONNOR: Because he was a member of the medical community. He reads the literature. He saw the reports.

THE COURT: That's all hearsay, isn't it?

MR. O'CONNOR: No, not in terms of what it's being used for. It's being used to show why he stopped. I'm not using it to prove the truth of the matter asserted.

To rehabilitate him, I think he has a right to say what he learned and what he knew and why he stopped.

THE COURT: Tell me what question you intend to ask.

MR. O'CONNOR: "Dr. Asch, did you stop using the filters? Why?"

THE COURT: What do you think he's going to say?

 $$\operatorname{MR.}$ O'CONNOR: Serious complications including death. That was well-known.

THE COURT: Mr. North.

MR. NORTH: First, I think it's hearsay.

Secondly, I do not think I opened the door in the least.

Made no issue about why he --

THE COURT: Well, you didn't, but you clearly made an issue about the fact he continued using the filter after the study was over. That's a big part of your argument to the jury is he kept using this filter.

MR. NORTH: After these two complications in his

CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

study --

THE COURT: Right. Right.

MR. NORTH: -- that he tried to tell this jury made it necessary for a longer term study.

I think it's fair to say he continued to implant those. But I don't think for him to -- I do think there's a definite hearsay problem for him to come in and just say I quit using it because of what I read. But, secondly, I don't think that opens the door because I didn't make that point.

THE COURT: Well, I think you have opened the door to their asking why he -- whether he stopped and why he stopped.

If they introduce his statement that he heard about other complications, including death, and that's why he stopped, how is that being offered for the truth of the matter asserted?

MR. NORTH: It's being offered -- well, certainly he would not stop using it if he did not believe them to be true. Those statements to be true.

And why does he need to say "death" anyway? Because he can't prove those happened. He either knows they happened or it's just hearsay, he's just hearing it without knowing that they really did occur.

I think it's fair game for him to say he's heard of other complications.

THE COURT: I don't think he should be limited to

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CROSS-EXAMINATION - MURRAY R. ASCH, M.D.

half an answer. If he's allowed to answer why he stopped, I think he should be allowed to answer.

So I'm going to allow you to ask the question. It is not being offered for the truth of the matter asserted.

If you want, I'll give an instruction that they're only to consider it for that purpose. But that does cast a bit of a light on that answer. I don't know if you want me to do that.

MR. NORTH: Right. I don't think so.

THE COURT: But I want to be clear. What I'm not ruling here is that the 403 ruling I've made repeatedly is being overturned. I still stand on that. I think it is relevant for this purpose of rehabilitating this witness, but I'm not opening the door to further inquiries --

MR. O'CONNOR: Understood.

THE COURT: -- you'll have to raise those as they come up.

MR. NORTH: And just so we don't come right up here,
I will object on 403 grounds if he continues to go into detail
about it because I think it's just the fact he's heard it
that's relevant.

THE COURT: I understand the questions that are going to be asked and I think those are appropriate.

MR. O'CONNOR: Thank you.

THE COURT: Thank you all.

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

11:41:52 1 (Bench conference concludes.)

MR. O'CONNOR: May I proceed, Your Honor?

THE COURT: You may.

REDIRECT EXAMINATION

BY MR. O'CONNOR:

- Q Dr. Asch, you were asked questions by defense about your use of Recovery filters after the study. Do you recall that?
- 8 A I do.

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- Q Did you stop using the Recovery filter?
- A I continued to use the Recovery filter at my new hospital because I believe that it offered potential benefits to the patients. And although I was working at that time outside of the clinical study, I did clearly direct the ordering physician to do the follow-up that I had done in the study. So number one, do routine abdominal radiographs, and, number two, to contact my team at the time when the IVC filter could
- Q Different question. Did you eventually stop using the Recovery filter?
- A Yes. I stopped using them when I had heard word on the street about the increase in the number of reported complications of the Recovery filter.
- 23 Q And what complications concerned you?

and should be removed.

A The complications that I had experienced in my small trial: Fractures and migrations and death.

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REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

- Q With respect to the Recovery filter?
- A With respect to the Recovery filter, yes.
- Q And did you ever go back to use the Recovery again?
- A I have not.
 - Q Now, just in fairness, on your compensation, it's actually -- in addition to what you talked about, there's also compensation for your colleagues; is that correct?
- 8 A Yes.

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- Q And that was 20,000 as well?
- A Right. Again, the compensation structure is identical now as it has been always in my practice for anyone I'm working for. Compensation for me, and if I need to replace myself by hiring -- I hire someone, I need to pay someone to do the work to allow me to be here today.
- Q Now, Dr. Asch, you were asked about the complications in your study and including the migration and the -- that you talked about in Patient 9 and the fracture that you saw in Patient 33. Do you recall that?
- A Yes.
 - Q Now, how long were those patients involved in your study?
 - A I don't recall exactly. I believe Patient Number 9, I
- 22 believe his filter had been in a fairly short period of time.
- I'm guessing a couple weeks. Patient 33 with the fracture, I believe the filter was in approximately 75 days.
 - Q Did these complications occur in a relatively short period

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REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

of time?

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- A The complications occurred during those periods. So let's say a couple weeks and 75 days were the approximate length of time from filter insertion to the time of a complication.
- Q At any time did you ever reach out to Bard -- you were asked questions before and one thing about the pregnant patient and your letter is you put in there that these patients need to be monitored. Do you recall that?
- A Yes. Monitoring is essential.
- Q After you had your concern that you learned about Bard filters, did you ever contact Bard?
- A I did contact Bard. Now, at that time I was in a community practice. We didn't have the academic and research support to follow up on all of our patients, so I contacted Bard and I asked them for assistance in allowing me to identify and contact the patients that I had placed their device in so that I could bring them back, follow them up, evaluate them, and retrieve the filter, and they denied that request.
- Q And did you contact them because of the concerns you learned about, about how -- the serious consequences of the Recovery filter?
- A Yes. I heard -- after I had heard about the increased number of reports of adverse complications, I contacted Bard

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

so I could get the filters out of my patients before there 11:46:23 1 2 was a complication. 3 MR. O'CONNOR: Now, let me display Exhibit 567, 4 please, Gay. Thank you. 11:46:39 BY MR. O'CONNOR: Dr. Asch, did Bard ask you to write this letter? 6 7 Α Yes, they did. 8 And did you have any idea who or where Bard intended to send this letter? 11:47:14 10 Well, as I say, it was my understanding they were going to use this letter for the FDA in order to support the 11 12 clinical trial that we talked about way back in my initial 13 meeting with them in 1999 because they came to me initially 14 because of the restriction in using a new device, new 11:47:38 15 untested device, in American -- in the States, and so this 16 letter, I thought, was meant to allow that study to occur. 17 MR. O'CONNOR: Let's publish this to the jury, 18 please. 19 It's been admitted, Your Honor. May I publish? 11:47:54 20 THE COURT: Yes. 21 BY MR. O'CONNOR: 22 Dr. Asch, was this letter written before you stopped using 23 the Recovery filter because of the serious complications you 24 had learned about?

11:48:05 25

Α

Yes.

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

Did this letter concern -- was it limited to retrievable 11:48:10 1 2 filters? 3 This letter was -- again, it's a bit vague, but this letter was meant to support specifically the Recovery filter. 11:48:27 5 But the overall letter was to support the concept of a 6 retrievable filter, but in this case the letter was specific 7 in describing my use with the Recovery filter, again, so that 8 a study could be done. 9 MR. O'CONNOR: Now, Gay, would you please show 5189. 11:48:55 10 BY MR. O'CONNOR: Keep in mind, Doctor, the date of this letter is March 10, 11 12 2003. 13 Α Yes. 14 Q Thank you. 11:49:14 15 And you wrote the letter after the submission that --16 MR. O'CONNOR: May I publish this to the jury, 17 Your Honor? I believe it's admitted. 5189. 18 THE COURT: You may. BY MR. O'CONNOR: 19 11:49:25 20 Dr. Asch, this is the submission to the FDA 510(k) that Bard made where they talked about using your study as 21 22 substantial equivalence. Do you recall that testimony? 23 Yes, I do. Α 24 Did you have any idea that Bard had used your study to

support substantial equivalence for the Recovery's use as a

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REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

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permanent filter?
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                  I had no idea that they intended or did actually do that.
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                  Would you ever have permitted any study you had done or
               any letter you had wrote to be used to support the permanent
               use of the Recovery filter?
11:49:57
                  No. My study wasn't designed to test a permanent filter.
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               I do not believe there is any scientific evidence to support
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               this as a permanent safe filter.
                  Was it your understanding always that Bard intended to
               have a long-term clinical study?
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                  Yes. Yes, that was the constant discussion: We are
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               looking forward to having a long-term study.
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                        MR. O'CONNOR: Gay, would you please put up
               Exhibit 558. And go to the last page --
         14
                        Excuse me, Your Honor.
11:50:38 15
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               BY MR. O'CONNOR:
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                   558, Dr. Asch, this is the report that you wrote following
               your short-term pilot study for Bard; correct?
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               Α
                  Yes.
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                  And you were asked questions about this document by
              Mr. North. Do you recall that?
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              Α
                  Yes, I do.
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                        MR. O'CONNOR: Would you go to the last page, Gay,
         24
              please.
11:51:03 25
                       And, Gay, can you highlight the last sentence before
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REDIRECT EXAMINATION - MURRAY R. ASCH, M.D. the last paragraph. Do you see where I'm looking? "A large." 11:51:17 1 2 Can you narrow that a little bit. 3 Gay, highlight "A large", that sentence, please. 4 BY MR. O'CONNOR: And, Dr. Asch, when you wrote your report, you reported --11:51:38 was it your intent to report to the medical community your 6 7 findings in the pilot study? 8 Yes. Did it also include recommendations? A Yes. The recommendation that you've highlighted here, a 11:51:54 10 11 large multicenter study is warranted. And, again, I used 12 words like "preliminary" and "suggest that" because you can't base --13 Can you read what you wrote --14 MR. O'CONNOR: Your Honor, may I display this to the 11:52:08 15 16 jury? 17 THE COURT: Yes. MR. NORTH: Your Honor, it's not in evidence. 18 THE COURTROOM DEPUTY: It's not in evidence. 19 11:52:14 20 THE COURT: 558? I show it in evidence. 21 MR. O'CONNOR: This is Exhibit 558. 22 THE COURTROOM DEPUTY: He talked about it but never 23 moved it. 24 THE COURT: I show it as being admitted. You do not?

THE COURTROOM DEPUTY: I do not. He never said

11:52:27 25

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REDIRECT EXAMINATION - MURRAY R. ASCH, M.D. 11:52:29 1 admitted. 2 THE COURT: Okay. I guess it's not in evidence. 3 MR. O'CONNOR: And it is a publication, Your Honor. 4 I'm just wondering for purposes of his testimony if we could 5 just show the one highlighted sentence. 11:52:36 THE COURT: Well, are you using it under 803(18)? 6 7 MR. O'CONNOR: Yes, sir. 8 THE COURT: Can't be displayed to the jury, then. 9 BY MR. O'CONNOR: Doctor, would you please read into the record the 11:52:50 10 highlighted statement you wrote. 11 12 "A large multicenter scientific study is warranted to 13 further substantiate the role and value of this retrievable 14 filter." And is that something you had always expected Bard would 11:53:04 15 16 do, a large multicenter scientific study? 17 I had been told repeatedly by Bard and it was my expectation that a large study would be done following this 18 pilot study. 19 11:53:20 20 And was one ever done as far as you learned? I'm not aware that a long-term study has ever been done. 21 Α 22 Now, you were also asked questions about the letter that 23 you wrote to a publication. 24 MR. O'CONNOR: Gay, would you please display

11:53:38 25

Exhibit 555.

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

BY MR. O'CONNOR:

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Q And, Doctor, again, what was the purpose of this letter?

A The purpose of this letter was to inform the medical community of a significant complication, in spite of my words, significant complication that occurred in a pregnant woman. And I wrote this specifically because the timing of this event occurred after the manuscript for the first 32 patients had been in progress. So the initial manuscript that we just looked at didn't describe the filter fracture. So I thought it was of the utmost importance that the community, particularly the obstetric community, was aware there was a new filter out there in the works and that a complication, a significant complication, occurred in a

MR. O'CONNOR: Gay, would you please go to the second page.

And, Gay, please, the last sentence in the second-to-last paragraph, would you highlight that. Last sentence, Gay. "Routine."

BY MR. O'CONNOR:

pregnant woman.

- Q And, Dr. Asch, when you wrote that letter, did you include recommendations based upon the experience you had in your study?
- A Yes. We altered our study throughout to emphasize and increase the monitoring of these patients to ensure we

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

11:55:29 identified an asymptomatic complication before it became 1 2 symptomatic. Would you read the highlighted section to the jury, which 3 includes your recommendation, please. "Routine abdominal radiography is thus recommended for 11:55:37 all filter patients in order to identify filter fracture and 6 7 migration." 8 Now, do you recall Mr. North asking you about the Bard IFU and how it mentioned the fracture that you had discovered? 11:55:56 10 Α Yes. 11 Did the Bard IFU ever include a recommendation or 12 instruction or warning to doctors that they should regularly monitor their patients with radiographs? 13 I'm not aware that they instructed doctors to monitor 14 their patients. 11:56:10 15 16 Was that what you were recommending needed to be done? 17 Α Yes. Did Bard ever indicate to you it would follow that 18 recommendation? 19 11:56:18 20 No, they did not. Α 21 Is it fair to say, Dr. Asch, that in response to 22 Mr. North's question, before you found out about the bad 23 events, did you still feel there was a use for retrievable 24 filters? 11:56:35 25 Α Yes. Retrievable filters offer great benefit to

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

- patients, but they need to be tested and safe.
 - Q And was it your feeling they also need to be monitored on a regular basis?
 - A And they need to be monitored. Absolutely.
 - Q Are you aware of Bard ever warning the medical community that if it was going to use the Recovery or retrievable filter, it should regularly monitor and have radiographic imaging done on its patients?
 - A I'm not aware of any Bard recommendation that states that.
 - Q Was that your recommendation to Bard?
- A That was my recommendation, yes.
- MR. O'CONNOR: Gay, go to the very last sentence.
- 14 BY MR. O'CONNOR:
- 11:57:12 15 Q And, again, Mr. North asked you about this writing,

 16 Dr. Asch. And, Dr. Asch, you did make recommendations in

 17 everything you wrote when you wrote your literature; correct?
 - 18 A Yes.

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- Q Would you read to the jury that last sentence.
- 11:57:43 20 A The last sentence in this manuscript states, "Further
 21 research is required to evaluate the benefits and risks of
 22 this intervention."
 - 23 Q And was that your recommendation to Bard?
 - 24 A That was my recommendation to Bard.
 - Q And did you ever receive any indication from Bard that

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D.

they followed your recommendation? 11:57:58 1 2 They did not inform me they followed this recommendation. 3 As a matter of fact, did you learn the opposite? I learned that they distributed this for widespread use across North America and Europe. 11:58:12 6 And, Dr. Asch, as we talked about, the complications that 7 you saw, first of all, when you first saw the complications in 8 Patient 9, did that concern you? Yes, that concerned me. And did it indicate to you that the Recovery filter was 11:58:48 10 11 not resisting migration? 12 Yes. That was a sign that the filter was not designed in a way to make it secure and stable in position. 13 And when you had indicated that it saved a life, what did 14 11:59:04 15 you mean by that? 16 Well, I meant that theoretically putting it all together, 17 the filter had trapped a large thrombus which, in the absence of the filter, could have contributed to patient illness. 18 The filter caught the clot and could have saved a life. 19 11:59:26 20 Could have saved a life. And when you talked to Bard, what did you tell Bard about 21 22 your concerns about that complication? 23 I told them I'm very concerned that we've only put nine 24 filters in and here is a significant migration.

THE COURT: Mr. O'Connor, we reached the lunch hour.

11:59:41 25

REDIRECT EXAMINATION - MURRAY R. ASCH, M.D. 11:59:43 1 MR. O'CONNOR: I just have one more, if I may, and 2 I'll be done. 3 THE COURT: One more question? 4 MR. O'CONNOR: Yes, sir. 11:59:47 5 THE COURT: All right. 6 BY MR. O'CONNOR: 7 And was your concern serious injury or death? 8 Yes. 9 MR. NORTH: Objection, Your Honor. 403. THE COURT: Overruled. 11:59:57 10 11 All right. Ladies and gentlemen, we're going to take 12 a one-hour break. We will plan to resume at 1 o'clock. 13 Please remember not to discuss the case, and we'll see you 14 then. 12:00:34 15 (The jury exited the courtroom at 12:00.) 16 MR. O'CONNOR: Your Honor -- excuse me. 17 Those are all the questions I had for Dr. Asch. THE COURT: All right. Counsel, as of the noon hour 18 today, plaintiff has used three hours and 26 minutes. Defense 19 12:01:57 20 has used one hour and 47 minutes. We'll see you at 1 o'clock. 21 22 MS. HELM: Your Honor, does that include the 23 allocation of the transcript that was played? 24 THE COURT: No.

MS. HELM: Did you give the whole thing to the

12:02:09 25

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plaintiff?
12:02:10
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                        THE COURT: I did.
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                        MS. HELM: In fairness, 11 minutes of that belongs to
               the defendant.
12:02:18
                        THE COURT: Okay. So that means plaintiffs are at
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              three hours and 15 minutes and defendant is at one hour and 58
         7
              minutes.
                        MR. O'CONNOR: Didn't mean to interrupt you before,
         8
               Your Honor. I just wanted to ask if Dr. Asch may be excused.
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                        THE COURT: Yes.
12:02:38 10
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                       MR. O'CONNOR: Thank you.
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                        THE COURT: All right. See you at 1 o'clock.
        13
                   (End of a.m. session transcript.)
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CERTIFICATE I, PATRICIA LYONS, do hereby certify that I am duly appointed and qualified to act as Official Court Reporter for the United States District Court for the District of Arizona. I FURTHER CERTIFY that the foregoing pages constitute a full, true, and accurate transcript of all of that portion of the proceedings contained herein, had in the above-entitled cause on the date specified therein, and that said transcript was prepared under my direction and control, and to the best of my ability. DATED at Phoenix, Arizona, this 16th day of May, 2018. s/ Patricia Lyons, RMR, CRR Official Court Reporter